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RAILWAY AGE

NOVEMBER 1, 1947

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BYERS WROUGHT IRON BLAST PLATES

Bridges that overpass railroad tracks generally take more of a beating from locomotive blast gases than from the vehicular traffic they carry. In designing the Beechmont Avenue concrete overpass in Cincinnati, the engineers recognized this fact . . . and took steps to protect the bridge in a time-tested way. Wrought iron blast plates, fabricated by Littleford Bros., Inc., were installed to shield the beams from attack, and so avoid excessive maintenance.

Blast gases contain moisture and carbon or sulfur compounds, which combine to form aggressive acids. The ash and cinder that are expelled at high velocity have a "sand-blasting" action that grinds away at the surface of the bridge members. Finally, the gases cause rapid and extreme variations in temperature. All this results in a rapid reduction of section, whether the members are concrete or metal, and to ultimate extensive repairs.

Wrought iron is almost universally used for protection, because its unusual resistance to these conditions has been demonstrated over long periods. Some of the most impressive evidence is found in the service records of old wrought iron railroad bridges, which withstood the attack of blast gases for many years.

The reason that Byers Wrought Iron serves so well in this punishing application is found in its unusual structure and composition. Tiny fibers of glass-like silicate slag, threaded through the body of high-purity iron, halt and disperse corrosive attack, and so discourage local pitting. The fibers also help to anchor the initial protective scale, which shields the underlying metal.

You will find some helpful information on the use of wrought iron for blast plates in our bulletin, "Wrought Iron in Bridge Construction." Ask for a copy.

A. M. Byers Co., Pittsburgh, Pa. Established 1864. Boston, New York, Philadelphia, Washington, Atlanta, Chicago, St. Louis, Houston, Salt Lake City, Seattle, San Francisco. Export Division: New York, N.Y.

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ELECTRIC FURNACE QUALITY ALLOY AND STAINLESS STEEL PRODUCTS

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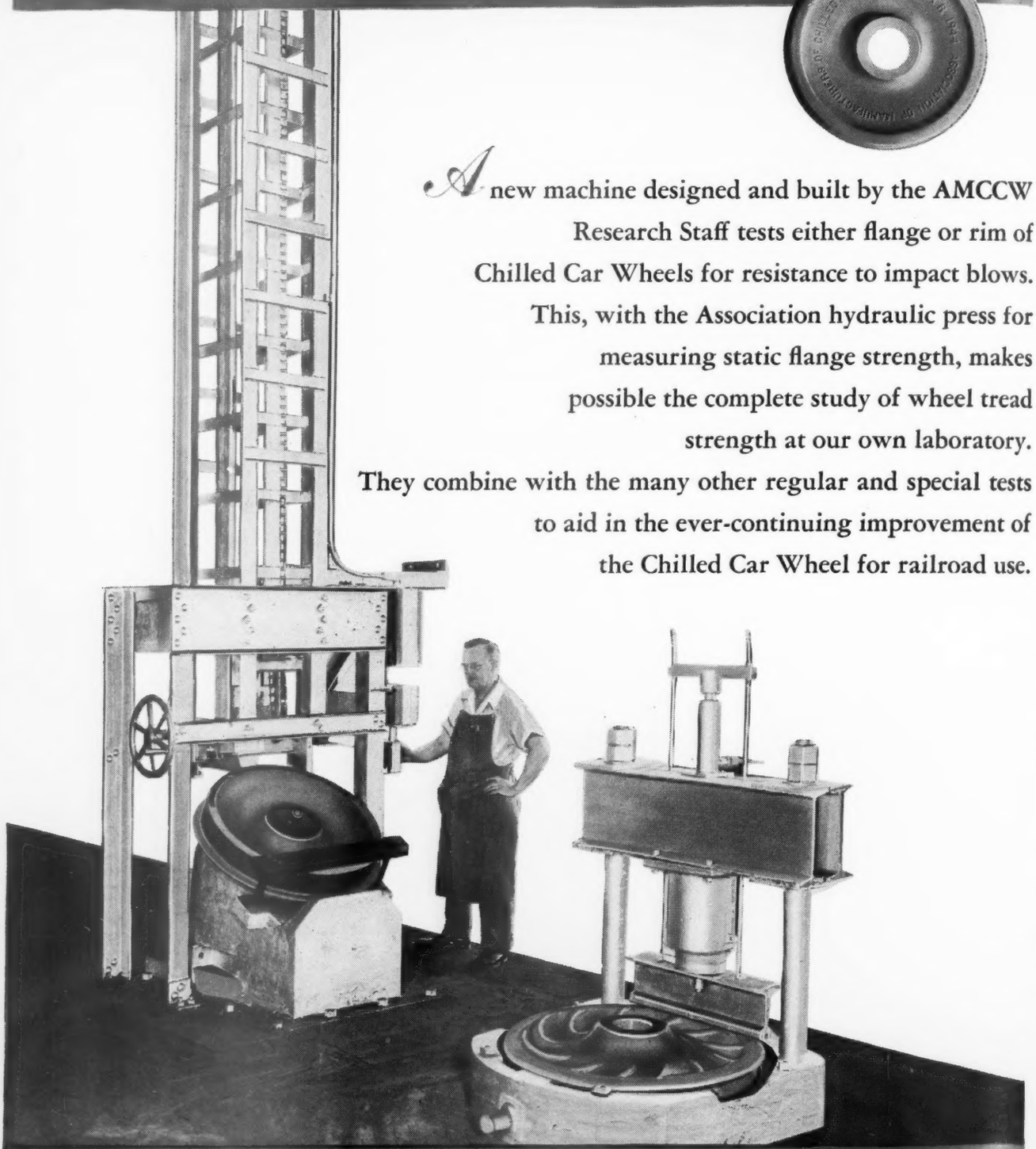
A new machine designed and built by the AMCCW Research Staff tests either flange or rim of Chilled Car Wheels for resistance to impact blows. This, with the Association hydraulic press for measuring static flange strength, makes possible the complete study of wheel tread strength at our own laboratory. They combine with the many other regular and special tests to aid in the ever-continuing improvement of the Chilled Car Wheel for railroad use.



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★

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When your switchers serve two yards—

two-channel communication is best!

"Union" Inductive Train Communication equipment can be installed in yards for either one or two-way voice transmission. In addition, you may choose between single or two-channel equipment.

The two-channel feature is especially advantageous where the same group of locomotives serves two adjacent yards. A separate channel can be assigned to each yard so that communication in one yard does not interfere with that of the other. However, locomotives can move from one yard to the other with no attention to communication equipment other than selecting the proper channel, by simply moving a small selector lever, for the yard in which they are working. If desired, two-channel office equipment can also be installed, so that communication can be carried out between office and locomotives operating in either yard.

Consider the advantages of this two-channel system—how effectively and efficiently it coordinates yard operations. May we help you determine its possibilities in your railroad's freight yards?

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The Voice of Experience in Train Communication

UNION SWITCH & SIGNAL COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

SUCCESS STORY: The Elgin, Joliet & Eastern put a Baldwin-built 2,000-hp. single-cab Diesel-electric transfer locomotive in test service in the summer of 1946. Its versatility and capacity have been so acceptably demonstrated since then that the Outer Belt Line recently ordered 25 more almost identical locomotives. An illustrated article in this issue describes the operations of the railroad and outlines the procedure by which this capable pulling-power-producer's ability was employed to the best advantage. The basic idea in trying it out has been to assign it to the jobs where the going was toughest.

●

FUEL TEST PLANT: The Southern Pacific has set up a new standing test plant for locomotives in its Sacramento laboratories, where the fuel combustion and drafting arrangements used on oil-burning steam locomotives will be studied exhaustively to develop any possible operating economies. A brief description of the installation appears herein.

●

LESS RAIL: Production of rails in 1946 was 18.7 per cent below 1945, in spite of the fact that reconversion to the pursuits of peace was supposed to be industry's basic objective last year. Certainly the smaller production did not reflect lack of need, for wartime replacements necessarily were abnormally low, and prewar depression purchases necessarily were even lower. The figures appear in an article in this issue.

●

PULLMAN'S P-S-1: A detailed description appears this week (on page 33) of the Pullman-Standard 50-ton assembly-line box car for which orders already have been placed for 14,000 or so. With the idea of assuring rapid delivery at a reduced unit cost, this product incorporates more than the usual number of components designed and made by the car builder. In its construction a relatively large amount of copper-bearing open-hearth steel is used, and automatic arc-welding is extensively employed in the process of fabrication. The first car of this design delivered from the regular production line went to the Lehigh Valley.

●

FOR FEWER FIRES: In good times or bad the reduction of losses caused by fires is a form of smart business to which nobody is opposed. At the recent meeting in Chicago of the A. A. R. Fire Protection and Insurance Section ways and means of effecting such reductions were submitted and analyzed, our report herein explains. Such a simple procedure as stenciling "No Smoking" signs in box cars, it was agreed, may contribute considerably to the achievement of a better record of fire prevention.

●

PRACTICAL ELECTRONICS: No department on the railroads is branching out into new fields faster than that represented by the Communications Section of the A. A. R., the annual meeting of which is the subject of a report this week (page 42). Improved telephone train dispatching shared the attention of this gathering with such relatively new applications of the art of communication in the railroad field as train radio, centralized dispatcher locations, caboose power, wire recording for music reproduction, and public address systems.

●

YARDSTICK: After having tried unrestrained competition as a device for regulating the transportation industry, the American people decided—the Department of Justice excepted, of course—to have none of it, since it did not work effectively with an industry having the characteristics of a "natural monopoly." The alternative method of control is governmental regulation, and that device has been going through a thorough trial in recent years. Our leading editorial suggests a significant criterion by which the success of the process of government regulation can be measured—that is, the ability of the industry so regulated to match in progress and service and earnings the records of businesses regulated by free competition. By this test government regulation of transportation—or at least of railroads—has not been the success it could be and should be.

●

IS THERE A REMEDY?: This failure has not necessarily been one of the system of government regulation, but rather a result of its abuse in the interests of selfish or shortsighted special pleaders. This sort of abuse can be corrected very largely, our editorial points out, through the pressure of public opinion, and such opinion will have to be shepherded by that segment of the public which knows when transportation is or is not giving the service and making the progress and showing the earnings that other businesses are producing—namely, the country's shippers, and particularly its big shippers. The industrial traffic managers are the shippers' natural spokesmen in this field, and the opportunity is theirs to insist that government regulation of transportation operate wholly in the long-range national interest.

●

IN THE BACK OF THE BOOK: Acquisition of the Florida East Coast by the Atlantic Coast Line is before the I. C. C. again. . . . The Union Pacific has set its signals for an additional $67 million outlay for improvements and equipment. . . . The brotherhoods' threatened strike in Canada over vacations has been averted—in the way such strikes usually are averted. . . . Earl T. Moore succeeds William Wyer as the chief executive officer of the Jersey Central. . . . The C. & O. plans to buy 45 steam locomotives. . . . A. C. F. has delivered the R. F. & P.'s new Richmond-Washington streamliner. . . . Southern carriers are being sued, along with the firemen's brotherhood, for alleged discrimination against negroes in making preferred runs available. . . . The Norfolk & Western is giving its home town (Roanoke) a practically new passenger station. . . . A "Friendship Train" will cross the country garnering food for Europe.

A BRIGHTER SIDE: That there are elements of weakness in the railroads' current credit standing—as there have been for years—is obvious to anyone who looks at the markets' appraisal of railroad securities. Essentially this weakness is lack of confidence in the railroads' earning prospects. But there are elements of strength in the picture, too, and it's entirely possible that some of them are being overlooked in investors' appraisal of the railroads' standing. What they are, and what they can mean to the railroads in the future, a feature article in this issue indicates (page 29).

●

WEST TEXAS OIL: This year the Texas & Pacific has had an opportunity to show its mettle as an efficient transportation agency, because crude oil shipments from expanding producing fields on its lines are giving it solid trains of tank cars to handle at a rate not equalled in the busiest war years. The story of this development appears in this issue.

●

REACHING THE EMPLOYEE: One of the difficulties in the way of a quick and permanent betterment of employee-management relations on the railroads is that of effectively explaining to employees what management is doing and what it wants done. A remarkably useful means of communication with employees is now available in the form of the sound motion picture, and an editorial in this issue calls attention to its advantages and adaptability for this purpose.

●

ACHIEVEMENT DAY: It's been a quarter of a century since what is now the Electro-Motive Division of General Motors had its beginning in a small office in Cleveland. In an illustrated article on page 26 the dramatic story of the organization's development is suggested as the silver anniversary ceremonies are described. The occasion was marked by the honors paid H. L. Hamilton, founder, in which General Motors officers and Burlington President Budd and Santa Fe President Gurley participated. And very appropriately the opportunity was seized to dedicate at La Grange the new General Motors Locomotive Development Center, where the most advanced facilities are being provided for research and tests on Diesel-electrics and motive power of other types.

●

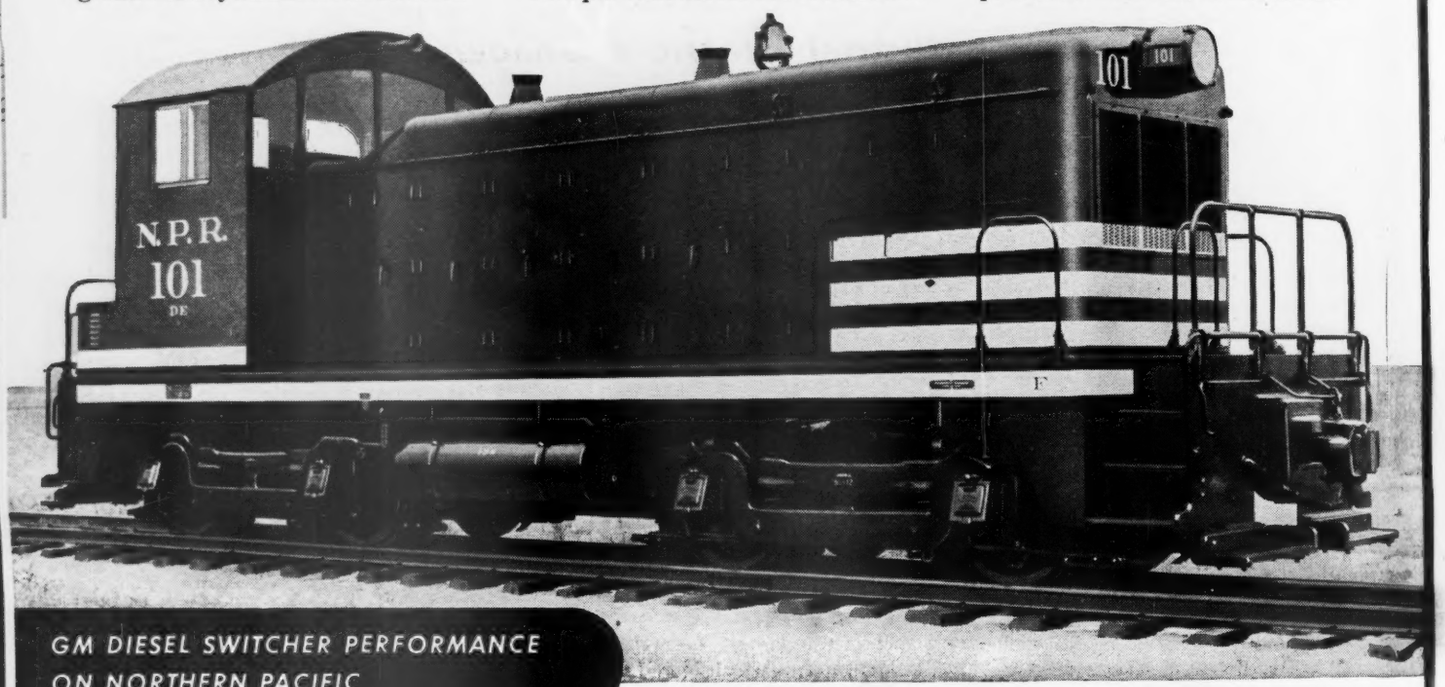
SAME STORY ON CARS: In his October comment on the transportation situation, summarized in the news pages, Car Service Chairman Kendall once more finds the pressure on the freight car supply unalleviated. Not only box cars for grain but hoppers and flats and gondolas are short and are likely to be short for months to come, although the production of new cars is giving him some encouragement. Meanwhile the Interstate Commerce Commission has revived its car rerouting office, with E. W. Coughlin in charge, to oversee car movements throughout the East, and the effective date of Service Order 778, the 48-hour order, has been set back.

They reap a harvest in the yards

GENERAL MOTORS Diesel switchers do *more* than save their cost in economies produced —they reap a harvest in all-round improvement of yard operation with faster "stop and go" switching, heavier yard movements, greater safety and smoother switching with less damage to lading.

The performance record of seven GM Diesel switchers in service on the Northern Pacific since 1938 is typical of GM Diesel reliability. The high availability average of 95.5 per cent across 591 locomotive months of service is a fraction higher than the all-time national average for General Motors switchers.

Where maximum Diesel availability is utilized, GM Diesel switchers continue to be one of the most profitable railroad investments.



GM DIESEL SWITCHER PERFORMANCE ON NORTHERN PACIFIC

Loco. No.	Entered Service	Total Hours Worked	Av. Hours Worked per Month	Per cent Availability
100	12-19-38	61,087	593	88.7
101	3- 6-40	55,680	626	95.9
102	3- 6-40	60,236	677	97.4
103	3-18-40	60,536	688	97.1
104	6- 3-41	50,583	684	96.6
105	6- 4-41	49,455	668	96.4
106	6- 3-41	50,112	677	96.7
		387,689	657 (Av.	95.5 (Av.)

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS LA GRANGE, ILL.

RAILWAY AGE

How Industrial Traffic Management Can Win Higher Esteem

The traffic managers of industry have embarked upon a campaign to secure wider recognition of the professional status of their work, and of its value to the companies which employ them. This effort deserves, and will unquestionably receive, all the cooperation from the railroads that they can consistently give.

One of the surest means of acquiring, and the only method of retaining, an enviable reputation is to deserve it. There are many industrial traffic managers, known personally and by reputation to this paper, who have attained a level of disinterested understanding and endeavor which would do credit to the country's ablest economists and jurists, in behalf of a sound national program for transportation. There are others whose point of view is still beclouded by considerations of immediate self-interest, and the devil take the hindmost. If the campaign to give higher standing to the profession of industrial traffic management is to thrive, then traffic organizations will find it advantageous to follow, more resolutely and consistently than they have in the past, the leadership of the real statesmen among their number.

Industry's Long-Run Advantage

The basic problem of industry as regards its transportation service is not that of securing temporary advantages in rates for this or that locality or commodity, or of getting transportation expenses reduced at the price of increased taxation. Rather, its problem is that of providing the conditions necessary to the continued adequacy and progress of transportation so that industrial development and prosperity will never be halted or endangered because goods and raw materials are produced which cannot be promptly, reliably and economically delivered. It would be just as intelligent for industry to dismiss its sales forces as for it to advocate or tolerate conditions in transportation which discourage enterprise and stifle progress.

Experience of many years has shown that transportation belongs to that peculiar category of businesses which exhibit the traits of "natural monopoly." This industry cannot retain its health, from the viewpoint either of its owners or its customers, if its regulation as to service and pricing is left to the ordinary forces of unfettered competition. Transportation needs to have enforced upon it by expert and public-spirited governmental regulators the kind of prices and service which would be brought about by normal competition if the industry did not have its "natural monopoly" character.

How Regulation Is Appraised

If the regulators were always fully competent and devoted to the long-run national interest, then they would insist upon maintaining in transportation prices, earnings, and service practices parallel to those prevailing in the steel business or the automobile business, or other unregulated large-scale industry. The degree to which such earnings and prices are attained, or fail to be attained, in a regulated industry provides a constant and unassailable yardstick by which the competence of the regulators can be judged. If government regulation, when it invades such an industry as transportation to control its service and prices, fails to keep that industry reasonably close in earnings, service and progress to businesses which are healthily regulated by competition alone, then government regulation has failed of its purpose and justification.

No one can successfully deny that government regulation of transportation, and especially of the railroads—when measured by this yardstick—has been a failure. *Why* has it failed; and is the failure without remedy? Answers to these questions are not difficult.

Regulation, as the term is used here, embraces much more than the control of rates by the Interstate Commerce Commission. It includes also the interference of the federal government in labor relations; the federal and state tax aid and other promotional efforts in behalf of some agencies of transportation, but not of the others; and the regulatory activity of the state commissions. The stocks of the railroads are selling at about 50 on the Dow-Jones average, while those of unregulated industry are selling at more than 180. The railroad average has been constantly below 100 for almost 17 years. The railroad average prior to the first world war had always been higher than the industrial average, but has never equaled it since 1921.

The railroad industry has undergone drastic financial reorganization since the onset of the depression of the Thirties—a process which has greatly increased the average equity represented by its stock—but the market value of railroad stock has not shown proportionate improvement. Railroad traffic, both freight and passenger, this year is running at a level about 50 per cent higher than in 1929 when the average price of railroad stocks was three times what it is today. Net railway operating income so far this year is 40 per cent less than it was in 1929 when the railroads were doing only two-thirds the volume of business that they are doing today.

The increase in traffic demonstrates that there is no question here of a declining or moribund industry. There is no possible explanation for the low esteem in which railroad stocks are held except their poor net earnings, actual and prospective—and there is no possible explanation for such low railroad earnings, compared to those of other industry, except the kind of regulation to which the railroads are subjected and from which other industry is largely exempt.

Regulation which produces such earnings and such stock prices is definitely inimical to a continuing inflow of new capital to the business—and, as everybody with business experience knows, such an inflow of new capital is indispensable to continued improvement in plant, without which both the adequacy and the quality of transportation service are bound to suffer. Thus, the kind of regulation to which transportation is subjected—and which industry is tolerating—is going directly counter to the interest of industry in the maintenance of adequate and reliable transportation service.

What Is Wrong with Regulation

A thorough trial was given to unfettered competition as a regulator of transportation, and it proved a total failure. A similarly thorough trial is now being given to government regulation, with progressively discouraging results—not necessarily because there is inherently anything wrong with the system itself, but because regulation is being swayed too much by local and special-interest pressure and is failing to recognize the predominance of the public interest.

As previously noted, the term regulation is used here to include all the intrusions of political authority into the transportation business, and does not refer merely to the control exercised by the Interstate Commerce Commission. The failure of regulation to maintain a financially healthy transportation industry is, thus, a failure not alone or even mainly of the federal and state authorities who control rates, but includes the derelictions of the officials who deal with labor relations and of the legislators who have intruded into transportation to finance with public funds facilities in competition with those in private ownership. The numerous governmental functionaries who have in their hands the fate of the transportation ought to be learned and dispassionate judges. Actually, not always through any fault of their own, they are often little more than the political instruments of dominant public opinion—and the principal determinants of dominant public opinion toward transportation are its biggest customers. The active agents of those customers are the industrial traffic managers.

It is quite inconceivable that the regulators and the legislators whose faltering hands have wrought such chaos in transportation could continue to do so if the dominant spokesmen for transportation's largest customers should resolutely insist that these public servants act in the national interest, rather than in that of special privilege.

There are great and statesmanlike minds in the industrial traffic fraternity. If the profession would give itself over unreservedly to the leadership of such men, it would deserve and, quite likely, would achieve and retain the rank in general estimation which is not often denied to those who conspicuously and unfeignedly subordinate their immediate selfish concerns to the long-term interest of the country as a whole.

Helping the Younger Men to Find Themselves

During the depression of the Thirties and the war years of the Forties the number of young men recruited for railroad service and in process of training was at an exceedingly low ebb. Prior to that time and for a number of years, the Railroad Y.M.C.A. has sponsored younger railroad men's conferences on a national scale and also on a few individual railroads.

The purpose of these conferences was somewhat in the nature of a "find yourself" program. An attempt was made, for instance, to inform the younger men about the possibilities in railroad service and inspire a greater interest on their part. By a cleverly devised counseling plan, in which railroad officers participated, the young men were helped to determine their fitness for the jobs they were in and to train for advancement in that work, or to consider transfer to tasks for which they were better suited. In almost every instance where a considerable number of the young men participated in such conferences, a few square pegs were found in round holes, and in almost every instance the program and check-ups inspired the young men to greater efforts to improve themselves and prepare for advancement. Incidentally, the railroad officers and supervisors who participated as counselors were inspired to extend their interest and help to all the young men in the service and not only just to those who were fortunate enough to attend the conferences.

With the return to more normal conditions following the war, the problem of properly placing and training the young men has again come very much to the fore, but the difficulties involved in organizing and holding the younger men's conferences are such that slow progress has been made in resuming the former practices in this respect.

The Boston & Maine Y.M.C.A. broke the ice a year ago, when about 65 young men and counselors from all parts of the system gathered for a two-day week-end meeting. It proved so fruitful and worthwhile that a second conference will be held the middle of this month.

Conditions today are such that it is more important than ever to encourage the best type of young men to enter railroad service and then to help them find their proper places in the organization and inspire them to develop their talents and abilities to the utmost.

Making the Most of the Car Supply

Last week in a discussion of the car supply in these columns it was said that a slight reduction in car shortages reported during September over those reported during March and April was not the result of the amelioration of the car supply, but of an increase in the intensity of utilization. This increase in utilization compared with last year is appreciable; in fact, the results approach those attained by the intensive effort of the railroads and shippers alike during the war to meet the nation's demand for freight movement.

Comparing the first seven months of 1947 for which the data are available with similar periods of preceding years, it will be seen that the tons per loaded car have increased from 30.9 in 1946 to 32.5 and that the best performance for the comparable period in any war year was 33.5 in 1943. Similarly, the car-miles per car-day have gone up from 41.1 last year to 44.9. Here the approach is considerably short of the 49.7 attained during the first seven months of 1944. The net effect of these two factors is reflected in net ton-miles per car-day. This overall performance has increased from 842 in 1946 to 966. It was 1,067 in 1944.

But, perhaps, what has really been happening is best reflected in the number of car-days between carloadings. This is nearly one day less than during the best of the war years and two days less than during 1946. A comparison of carloadings and available car-days during the seven months' period shows an approximate total of 18 in 1946 and 16 in 1947. After deducting from these days the average time spent moving in trains and under repairs, it will be seen that these saved days have all come from the time spent in the hands of the shippers and receivers of freight, in railway yards, and in interchange, which has been reduced from about 15½ to 13½ days.

While statistics alone do not show it, it is a safe assumption that the shippers and consignees have contributed their share to this remarkable performance.

The Sound Movie as a Means of Communication

The sound motion picture has gained acceptance on a number of railroads as an effective means of training and communication. Railroads which have not yet used this device may find it profitable to look into the results obtained by the ones that have. Its advantages have been proved in many industries, none of which needs informed employees more than do the railroads.

Among the first railroad people to realize the power of the motion picture as a means of communication with employees—to instruct them in their jobs and to explain safety and management-employee relations programs to them—was J. T. Hawkinson, now personnel assistant in charge of the Illinois Central's Bureau of Audio-Visual Training and Safety Aids. Based on analysis and research by himself and others, he advances three significant claims—(1) that 25 to 35 per cent more information is gained by an employee from a motion picture than from any other method of presentation; (2) that this percentage of gain remains the same, regardless of the employee's "I. Q."; and (3) that retention of the information gained from a motion picture with sound is greater at all times than from any other training method.

Others with experience have reached the same conclusions, with the result that amateur or semi-professional movies have been making their appearance on the railroads in increasing numbers, and have been supplemented by equally valuable films produced by the National Safety Council, the federal government's Education and Public Health organizations, and other agencies. "Suggestions Unlimited," "Problems of Supervision," "Our Health Is in Your Hands," "Safety Management for Foremen," "Shortcuts to Danger," "Safety at the Switch and Throttle," "Safety in Action," "A Helping Hand," "Use Your Head," and "Maintenance of Way Mishaps," are but a few of the effective titles produced by these and other agencies—the last two, developed by the Denver & Rio Grande Western and the Southern Pacific, respectively, being designed specifically for showing to maintenance-of-way employees.

Especially exemplified in these two productions, the first of which had its premiere as recently as September 16, before the annual meeting of the Roadmasters' Association, is the growing conviction among safety officers that carefully portrayed and explained unsafe, as well as safe, methods and practices, can be shown to great advantage, without any possibility of misunderstanding. Thus, both of these films, which are accompanied by carefully worded sound tracks, vividly depict a series of accidents in maintenance-of-way operations — some of the scenes being exact reconstructions of accidents that have occurred during the past few years.

Merely to say that these films are effective in accomplishing their purpose is quite inadequate, for they are being acclaimed on every hand wherever shown, and the demand for their presentation far outruns any possibility of its being satisfied for many months to come.

Electro-Motive Silver Anniversary

Celebration of 25th year of General Motors division marked by dedication of Locomotive Development Center; pioneers of internal combustion and electric drive brought together

DEDICATION of a Locomotive Development Center, to house all personnel and facilities for future development work on General Motors locomotives—whether Diesel or some other prime mover—and an elaborate "silver anniversary" dinner, at which some 750 railroad officers from all parts of the country and leading business and professional men of Chicago were guests of the corporation, featured the twenty-fifth anniversary celebration of the Electro-Motive Division of General Motors Corporation, at La Grange, Ill., and Chicago, respectively, on October 24.

Sharing the spotlight with the new research center at the afternoon program at La Grange was H. L. Hamilton, pioneer of the electric drive and internal combustion engine combination as applied to rail vehicles, founder of Electro-Motive and now a vice-president of General Motors. Mr. Hamilton was cited as the outstanding figure in the effort to put Diesels on the American railroads, who has enjoyed the extraordinary good fortune of watching his idea grow from a one-room office in Cleveland, Ohio, to a huge industry, in the brief span of 25 years. In connection with the ceremonies there was unveiled a life-size bas relief in bronze of Mr. Hamilton produced by Paul Manship.

Diesel the Theme

The Diesel locomotive as seen by the manufacturer, the inventor and the customer in their respective roles was the theme of the speeches at the silver anniversary dinner at the Palmer House, of which C. R. Osborn, vice-president of General Motors and general manager of Electro-Motive Division, was chairman. Mr. Hamilton told the story of his development work. Ralph Budd, president of the Burlington Lines, and Fred G. Gurley, president of the Atchison, Topeka & Santa Fe, assayed the Diesel from the viewpoint of early and enthusiastic users; Charles E. Wilson, president of G.M.C., pinch-hitting for Chairman of the Board Alfred P. Sloan, Jr., described the corporation's role in Diesel building, and Charles F. Kettering, a director of G.M.C., spoke briefly about the principles involved in the two-cycle Diesel engine which powers E.M.D. locomotives.

Some 700 railroaders, newspaper men and other guests visited the La Grange plant on October 24 to join the 12,000 employees of the plant in the dedication of the research center and in viewing an extensive inside exhibit of more than 40 pieces of machinery or parts representing inventions or developments by Electro-Motive over its 25-year history; a series of 27 photo murals presenting a condensed pictorial history of the evolution of E.M.D. products from the early gas-electric rail car to the new F-3 Diesel-electric locomotive; and a track exhibit which included the oldest E.M.D. rail car in service—a Northern Pacific unit—the second to be turned out by the company, in 1924. (The first, an identical car purchased by the Chicago Great Western, was taken out of service some years ago after it was damaged by fire.)

In the line-up also were an 800-hp. gas-electric power car which has been pulling freight on the Chicago, Rock Island & Pacific since 1929, and Unit No. 9907A of the Burlington, which has travelled 3,695,943 miles at the head of the "Denver Zephyr," and thereby earned the title, according to Electro-Motive, of the "longest-traveled, self-propelled land vehicle in the world." The four-car "Train of Tomorrow" also pulled into the La Grange plant for a few days in the midst of its country-wide tour. Another feature of the track exhibit was the new E.-M. 1,500-hp. transfer locomotive.

Twenty-two men, now with E.M.D., who were with Mr. Hamilton in 1924, were presented with gold watches. It was noted that a history of Electro-Motive is under preparation by Franklin M. Reck of Manchester, Mich., to be entitled "On Time." The volume is to appear later this year.

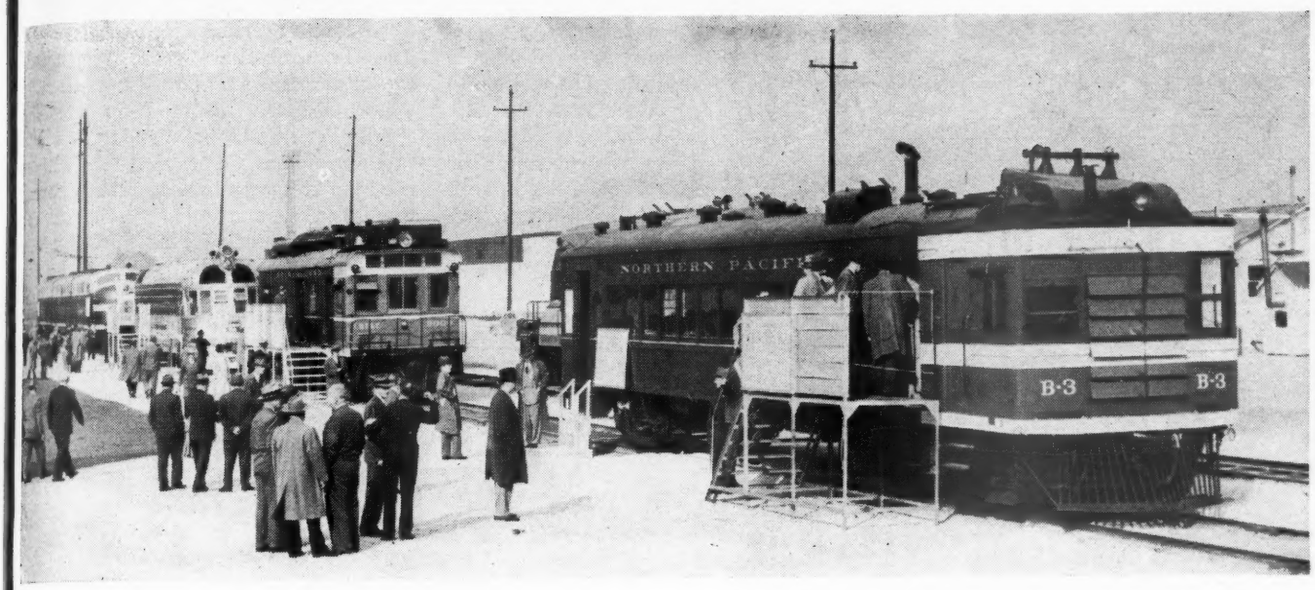
In reviewing the development of E.M.D., Mr. Osborn said that in 1930 the rail car reached its peak of acceptance; that the railroads needed a more powerful internal combustion prime mover. In spite of the fact that the country was in a deep depression and the product of E.M.D. was "relatively unknown and unproved," G.M.C. started a large plant at La Grange in 1935 exclusively for the manufacture of Diesel-electric locomotives. Four hundred employees manned the plant when it opened for business in 1936. Today, 12,000 employees work in it and at the new postwar Plant No. 2 in Chicago. The original plant had 206,000 sq. ft. under roof; today, E.M.D. operates under a roof of 2,500,000 sq. ft., or 57 acres. Since 1935, the division has produced locomotives of a total of more than 4,500,000 hp. Its current rate of production is about five units a day, which will add more than 1,500,000 hp. to the Diesel fleet annually.

Mr. Wilson, who spoke briefly in the afternoon, asserted that all of the earnings of E.M.D. since it was absorbed by General Motors in 1930 have been put back, with millions added, into the expansion of its plant and personnel. He said that such investment has made it possible for the division to break all production records this month; yet so great is the demand that delivery cannot be made on new orders in less than 18 months.

Locomotives Given Priority

At the dinner, Mr. Wilson expressed the opinion that the need for locomotives for the railroads properly comes before the need for automobiles and trucks. He revealed that E.M.D. does not come under the corporation's quota allotment of steel for its divisions but gets about what it requires.

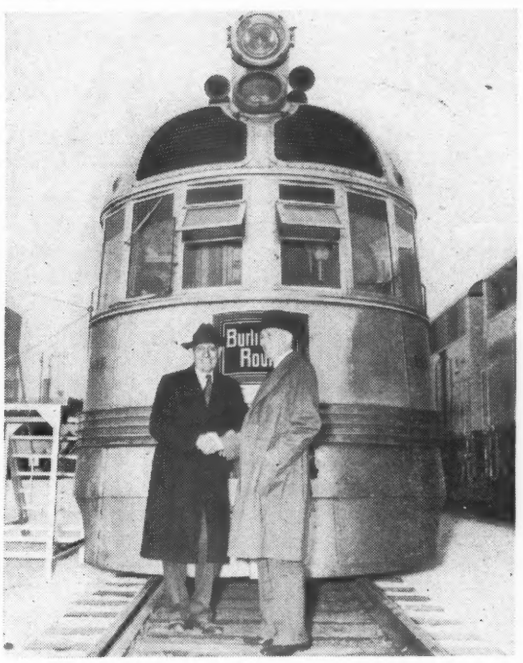
Introduced as the head of the railroad "which is by far the greatest user of Diesel locomotives," Mr. Gurley, speaking extemporaneously, said he had reason to believe that the brotherhoods had withdrawn their demands for two men on each Diesel unit, and expressed the opinion that the railroads' regional newspaper ads on waste of manpower "may have struck home." Declaring, "I'm all for the engine that can give us the thermal efficiency of the Diesel," the speaker assailed "a gentleman high in railroad circles" for his remarks that the railroads ought not to be permitted to use non-coal burning locomotives like Diesels, saying that he disagreed with the policy as much as is possible to disagree with anything. Citing the Transportation Act of 1940 as "a grand declaration of policy," Mr. Gurley asked his hearers to help make that policy effective so that the roads would be allowed to do the things they ought to do to make themselves more serviceable.



The line-up of exhibits at La Grange, Ill., was headed by the oldest Electro-Motive rail car in existence

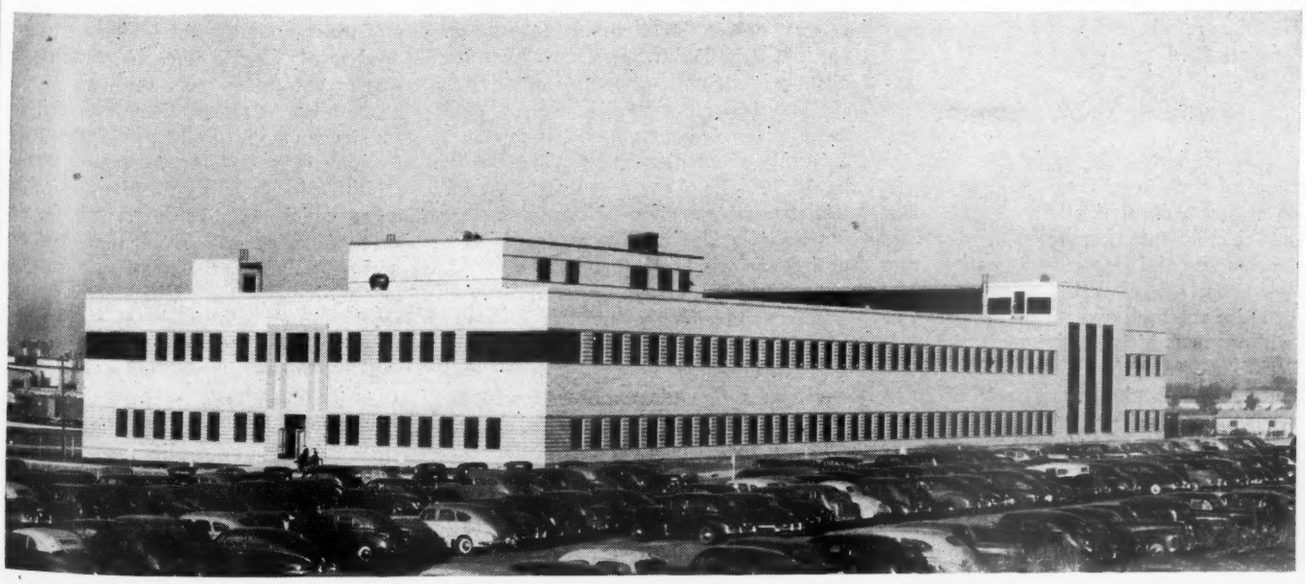
Mr. Budd attributed a part of the speed with which the Diesel was developed to the entry of Electro-Motive into the G.M.C. family. "General Motors had the financial ability fully to back up and follow through with the new designs and enable the Hamilton group to achieve the highest production efficiency and to continue to enlarge capacity to meet the needs which rapidly developed. For the first time in history, a builder of locomotives proceeded on a mass production basis to turn out standard-type locomotives from an assembly line, like automobiles. During the last decade, the railroads, for the first time in their history, have been taking a stock product and complaining only because they couldn't get more."

Citing the reduction in the cost of negotiating grades, due to the Diesel's greater thermal efficiency, Mr. Budd de-



Founder H. L. Hamilton and Charles F. Kettering exchange greetings at the pilot of Burlington's unit No. 9907A, which is said to have traveled farther than any other self-propelled land vehicle at the head of the "Denver Zephyr"

The new Electro-Motive Locomotive Development Center was dedicated to service on October 24



This bas-relief by Paul Manship in honor of H. L. Hamilton was unveiled at La Grange

clared: "Light grades and easy curves will never be out of date, and the lightweight Diesel train will do better on such track than elsewhere, but the Diesel can serve as a substitute for line and grade changes that would cost exorbitantly, or for electrification where numerous tunnels make steam operation objectionable."

The Burlington head recalled that his road actually had on order a lightweight passenger train in 1933 when Mr. Hamilton said, "I believe we can give you a Diesel engine for that train without delaying delivery date much, if at all." Early in 1934, after trouble with a cooling system had been overcome, the engine was delivered and performed admirably on the "Pioneer Zephyr's" initial run, when a speed of 109 m.p.h. was attained.

Lightweight Horsepower

Mr. Hamilton described the development of the Diesel locomotive as a fight to reduce weight per horsepower. The gas-electric rail car, he said, contained all the essential features of a satisfactory self-propelled rail vehicle, but could not produce enough power for train handling without prohibitive weight. In the early 1930's G. M. C.'s two-cycle Diesel engine satisfied "the ground rule of 20 lb. per horsepower."

The 12 years which E.M.D. devoted to turning out rail cars were important, said Mr. Hamilton, because that product gave the railroads an appetite for internal combustion power and gave his organization experience in railroad problems. He went on to state that, because E.M.D. owns no proving ground, "the railroads have been our laboratory; they loaned us their lines. The relationship between us and the railroads has been a close working one, always with cooperation for the common objective." Gaging the railroads' desire for Diesels by the fact that "since 1935, we've never been able to get the contractors off our property at La Grange," Mr. Hamilton asserted, "I can't imagine any industry's taking anything so new and strange as the Diesel and absorbing and pushing it so fast as have the railroads."

Mr. Kettering described briefly the development of his two-cycle Diesel engine as a direct result of research on ethyl gasoline. "We didn't develop the Diesel engine; we simply ran errands for the engine. We asked the engine what kind of pistons and fuel and the like it wanted. We let the engine tell us."

Locomotive Development Center

The new Locomotive Development Center is a two-story building, 389 ft. by 147 ft., located east of the Administration building at the La Grange plant. In it will be concentrated all of the personnel and facilities for future development work on General Motors locomotives, whether the power be Diesel or ultimately some other prime mover. Beyond the customary facilities for engineers and draftsmen found in a manufacturing plant, the center will have the latest specialized equipment for research, testing and experimental manufacture. The building includes a bay in which an entire experimental locomotive can be put together, tested, or torn down. While some departments of the center are in operation, it is expected that others may not be completed and fully equipped for another year or two.

As an example of the facilities available in the new Locomotive Development Center for research, design and testing, the Power Plant Group will have five cells for running all types of tests, three of these cells being used for durability testing of all engine parts. The Transmission Group, responsible for the main generator and traction motor designs, will have an adequate set-up for testing both generators and traction motors. The high bay will be used for stressing basic car body structure, trucks, and other parts of the locomotive requiring great forces. The Equipment Group will have facilities for testing fan and traction-motor blower characteristics, train heating boilers, and many smaller items.

The Air Brake Group will have facilities for checking and improving air-brake functions as well as developing more efficient ways of removing oil and water from the air-brake system. The Electrical Control Group will have space available on the balcony to develop not only experimental control schemes but to run life tests on all of the various electrical control equipment necessary in a Diesel locomotive. The Sales Engineering, Service Engineering and Styling groups are located on the second floor and tie in with the staff engineers on their various problems, the largest being the design and application of special extras required by each railroad.

A complete metallurgical and chemical laboratory is located on the first floor with modern facilities for fatigue testing, physical tests, X-ray and many other tests required to evaluate all of the various materials used on a locomotive. This department also is responsible for maintaining and improving the quality of all production material as well as developing new and better welding methods. In this section also is located the fuel and lubricating-oil laboratory.

The Fuel Section works closely with the Engine Group on combustion study, and also with the petroleum industry, since it is quite important, in looking into the future, to determine what types of Diesel fuels will be available and then try to develop the engine to burn these fuels most economically.

The complexity of basic equipment used in a Diesel locomotive requires an instrumentation technique of broad scope. For example, there are facilities for development of all types of electronic equipment needed for various tests, and facilities for building all types of equipment which may be necessary for investigation of any problem, either experimentally in the plant or on the locomotive in the field. This group works closely with General Motors Research and other testing laboratories so that they are always current on new techniques as well as newly-developed instruments.

The design and preliminary testing of all locomotive details can be done at the new Electro-Motive Locomotive Development Center, but it is impossible

(Continued on page 39)

How Railroads Look Investment Wise

No grounds for immoderate optimism but there are elements of strength in railroad finances which are often overlooked

By ***WALTER F. HAHN***
Smith, Barney & Co.

[*Railway Age* does not advise its readers on the purchase or sale of railroad securities, and no departure from this policy is involved in the publication of this article—adapted from a recent address by the author to the New York Society of Security Analysts. There is, however, no more important problem facing the railroads than that of obtaining an adequate supply of new capital—and the assurance of such a supply hinges in large measure on the estimate of railroad prospects by the security markets. A plentiful inflow of new capital helps everybody connected with the railroads—employees and customers alike—and nothing is so necessary to this inflow as optimism in the security markets about railroad earnings prospects. Every railroad department and every employee can help to strengthen his company in the eyes of investors by attacking those elements of weakness which this author points out, and by assisting in developing the elements of strength.—*Editor*.]

RAILROAD securities in general have been a source of concern to investors ever since May, 1946, when the first postwar wage increase was granted. Until the trend of wages is no longer upward, railroad securities will continue a source of concern to those who hold them. Since it cannot yet be said that the trend of wages is not upward, it is difficult if not impossible to visualize an extended, robust bull market in railroad stocks and bonds in the near future.

Most people think of markets as being either bear or bull. However, a pretty good case can be made for a third kind of market—a market which may be called an adjustment market. I think that railroad securities as a class have been in an adjustment market for the past year, and will continue in such a market until the following developments occur:

(1) The upward trend of wages ceases.

(2) The long-awaited business recession-depression occurs and runs its course or is eliminated as a prospect by its failure to appear.

I'll venture a long term prediction; namely, that just as in the years after 1932-1934 and 1938-1941, a vigorous bull market in railroad securities will follow the current adjustment period.

If we accept the theory of an adjustment market, it follows that for a further extended period the best results will be obtained from a trading rather than a fixed bull or bear attitude toward a large segment of the railroad list, as was the best policy in the adjustment markets that followed the bear markets of 1929-1932 and 1937-1938.

I think the concept of an adjustment market for most railroad securities fits the current factual and psychological background better than some other theory, primarily because there are so many conflicting favorable and unfavorable forces affecting people's judgment of present and future values and because this interplay of bull and bear forces seems likely to continue.

"Leverage" Effects

In the current environment, which is pessimistic rather than optimistic, it is hardly necessary to go into any lengthy recital of the adverse factors affecting sentiment toward railroad securities. The basic trouble is, of course, the upward trend of wages and other costs—particularly serious due to the high ratio of railroad wages to railroad revenues and the resulting low ratio of railroad net to railroad wages and railroad revenues. With revenues roughly $8 billions a year, railroad wages $4 billions a year, railroad net $½ billion a year—which was about the case in the twelve months ended June last—it follows, at least in theory, that a 10 per cent increase in wages goes a long way toward the elimination of net income and that a 20 per cent increase in wages eliminates net income entirely. But it also follows that a 10 per cent increase in rates on all types of traffic completely restores the net income figure to where it was before the 20 per cent increase in wages. Thus, an environment such as the present naturally gives the investing public the jitters. One minute you see railroad net income and the next minute you don't.

This situation is nothing new in the railroad industry. It has always been true that small changes in wages and rates mean large changes in net income. In 1929, when railroad net income was larger than in any other year except 1942 and 1943, a 20 per cent increase in the wage bill would have reduced such net by about 60 per cent—other things being equal, which they hardly ever are. In 1936, when people were pretty optimistic about railroads and when securities as a result sold pretty high, 10 per cent of the wage bill was greater than the net income.

Much of the time no great attention is given these relationships. But when, as at present, the wage trend has been strongly upward, then they become a matter of common knowledge and comment and concern.

The upward trend of wages and also the cost of materials and supplies is undeniably serious but I doubt that it is as important a factor at present as the levels of industrial and agricultural production which determine railroad traffic volume. I say this for the reason that the history of railroading suggests that freight and passenger rates will tend to keep pace with operating costs so long as the general economy is prosperous and the volume of production and railroad traffic large. As a result, from a near point of view, I should be more concerned regarding future railroad earnings by concrete evidence of traffic decline than by continuing evidence of rising costs which are primarily wages. And if, over the next year or two, railroad security prices are to be measurably lower than they were in May of this year, it will be the result, I believe, of business and traffic decline rather than of increased costs. In any attempt to judge the future course of railroad security prices, emphasis should be placed, I believe, on what is going to happen to the business and traffic levels.

In the foregoing connection, it is worth noting that during and after World War I, wage rates increased 111 per cent, freight rates 78 per cent, passenger rates 48 per cent. Since 1939 wage rates have gone up 67 per cent. If operating employees obtain a 15 per cent increase similar to that of the non-operating employees, wage rates will be up 75 per cent. Since 1939 there has been a 17½ per cent increase in freight rates but revenue per ton-mile has increased only about 9 per cent. Passenger fares are up about 12 per cent.

Cost of materials and supplies is about 90 per cent higher than in 1939. The

logic of the situation suggests strongly that by the end of the year freight rates will again be raised on a permanent basis.

Thus, the reasonable expectation for the near term is for a further period of satisfactory earnings for many, but not all, companies. I say "many but not all" for the reason that not in a long time, if ever, was there as much difference in the earnings of individual railroads as there is today. The term "satisfactory earnings" for the industry as a whole does not, under present conditions, mean all railroad companies.

If, apart from a possible bull market engendered by inflation psychology, the stage does not appear set for a normal type bull market, why shouldn't one then expect continuation of the bear market that began last year? Why shouldn't one expect materially lower prices for railroad bonds and stocks other than those relatively few possessed of investment characteristics? Why shouldn't one expect a return of prices to the low levels prevailing in periods such as the early and late 1930's?

The answer, I should say, is that there are too many features of strength in the railroad picture and the general economic picture to support such a view.

In the first place, there is plenty of evidence to support a belief that, on average, for years ahead this country will be busily engaged in the production of all of the many items that make up railroad traffic. Even the most pessimistically inclined agree that, after a setback, industrial production will continue on a high plateau for years to come. This expectation, which I think is well founded, makes it impossible to suppose that, in a generally favorable environment of relatively stable prices and wages, railroad wages and other costs will not be in reasonable balance. With plenty of freight to move, the railroads should be prosperous.

This view, which admittedly avoids the question of the nearer-term outlook, should be a sustaining force in any period of general unsettlement that may be encountered as an aftermath to the current inflationary trends.

In the railroads themselves are many elements of strength. One of the most important features of strength is the current tremendously strong financial position. Except in 1945 and 1946, railroads never in their history had cash and working capital as large as today. At the end of June, Class I railroads had cash of $1.9 billions and working capital of $1.8 billions. After World War I, that is in 1920, they had $400 millions cash, $600 millions working capital. In 1939 they had $700 millions cash and $200 millions working capital. Cash of $1.9 billions is a lot of money. It's between four and five times annual fixed charges and the companies that have it can't be threatened with serious financial difficulties for many years.

Practically all railroads have greatly reduced debt and fixed charges—by purchase of debt, payment of maturing debt without financing, by refunding high-coupon with lower-coupon bonds and through reorganization. After the relatively few roads that are still in bankruptcy have been reorganized, annual fixed charges of Class I railroads will be only about $400 millions contrasted with close to $700 millions in 1929. Highly important, particularly from the standpoint of investor reaction to the railroad industry as a whole and its securities, is the fact that the perennially bankrupt railroads have had their fixed interest debt and fixed charges drastically slashed as in no previous bankruptcy period. Seaboard had its fixed charges reduced from more than $11 millions a year to about $1.7 millions. The reorganization plan for the Rock Island calls for fixed charges of about $1.5 millions as against over $14 millions. North Western's fixed charges are now a little more than $2 millions a year whereas they used to be more than $16 millions. Milwaukee's fixed charges are about $3½ millions a year compared with about $15 millions prior to the last reorganization and over $20 millions prior to the previous reorganization.

In a period of stress, this condition could prove a tremendously important factor from the standpoint of price. It would tend to assure the security holder that temporarily bad earnings would not deprive him, through bankruptcy, of participating fully in a future period of better earnings.

No Drastic Maintenance Cut

A feature of strength to which no great attention has so far been given has to do with the present relation of maintenance expenditures to fixed charges. Maintenance expenditures are one of the few cost items over which a railroad company has a good measure of control. Such expenditures are usually raised considerably when traffic, revenues and earnings are large and contracted when traffic, revenues and earnings are small. It was this ability to contract maintenance expenditures that kept many railroad companies solvent during the 1930's.

Maintenance expenditures are now much larger than they used to be, in part due to heavier traffic, in part due to higher wages and higher costs of materials and supplies, and in part due to a desire of management to lay on "fat." Using Southern Pacific as an illustration, we find that maintenance expenditures (excluding depreciation charges) in 1929 were about $82 millions and fixed charges were about $28 millions. Last year, Southern Pacific's maintenance expenditures were about $159 millions. Its fixed charges are now less than $20 millions. On the basis of the 1929 figures just given, it required a 34 per cent reduction in maintenance expenditures to reduce them by an amount equal to fixed charges. On the basis of current figures it would require a reduction of only 12 per cent.

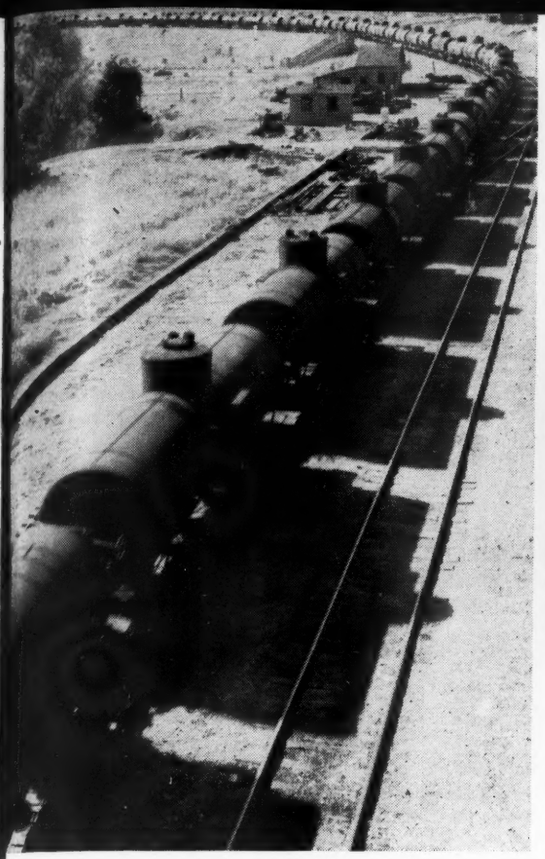
Stated differently—between 1929 and 1932, Southern Pacific's maintenance expenditures were reduced from $82 millions to $35 millions—a reduction of $46 millions or about 57 per cent. This reduction was about 1.7 times 1932 fixed charges of somewhat over $30 millions. A similar 57 per cent reduction in 1946 maintenance expenditures would amount to about $90 millions or about four and one half times current annual fixed charges.

Railroads now depreciate way and structures apart from ballast, rails and ties. Prior to the early 1940's, about the only depreciation charges were on rolling stock. As a result, depreciation charges are today larger than they used to be. For the twelve months ended June 30, 1947, Class I railroads charged their income accounts with depreciation amounting to about $350 millions. This is about $200 millions a year more than in the early 1920's, and about $150 millions more a year than in the early 1930's. Moreover, current annual depreciation charges of about $350 millions are within striking distance of the annual fixed charges of about $400 millions that the Class I railroads will have when the railroads still in bankruptcy emerge therefrom.

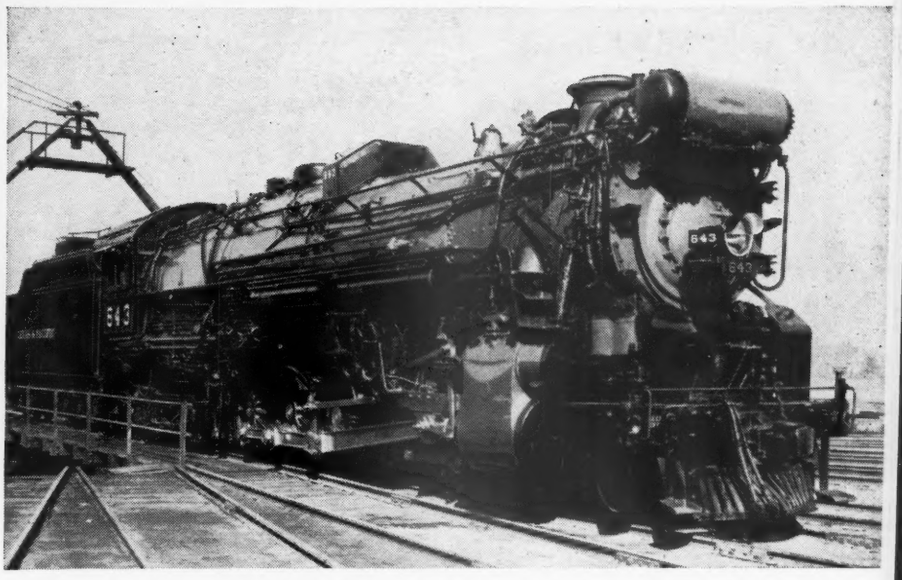
The overall figures are no indication of how large depreciation charges now are in relation to fixed charges in the case of individual railroads. Last year, Chicago & North Western had depreciation charges of $9.6 millions compared with fixed charges of $2.3 millions. Rock Island had depreciation charges of $6.6 millions in relation to the $1.5 millions fixed charges proposed by the reorganization plan. Frisco had $4.5 millions depreciation charges compared with current annual fixed charges of around $3 millions. Milwaukee last year had depreciation charges of $10.9 millions in contrast to fixed charges of $3.5 millions. Of course, if depreciation charges are considered a factor of safety, as they are here, consideration ought to be given equipment obligation maturities. In the cases just mentioned such maturities are exceeded by wide margins by depreciation charges. This is true also of most other companies.

Another aspect of the railroad security situation to which attention may well be drawn is the relatively low price at which many companies are selling on the basis of the market prices of all

(*Continued on page 32*)



Above—A train of West Texas crude oil at Dallas, Tex., en route to an East Texas processing plant



Fast, powerful locomotives expedite heavy tank car movements of crude oil from West Texas origins

Right—Tank cars of raw gasoline, shipped on a 20-car rate, are unloaded at a blending plant and tank farm at Orme, Tex. This is one of three blending stations built since establishment of trainload rate on intrastate movements

Crude Oil Tank Car Shipments Top War Peaks on T. & P.

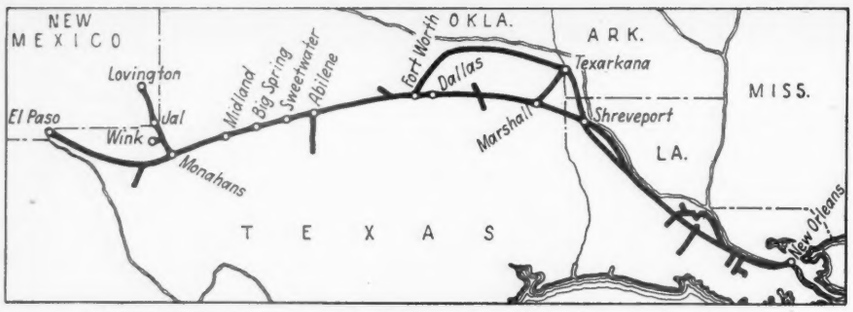
WEST TEXAS crude oil shipments by tank car are rolling on the Texas & Pacific at a rate equal almost to that of the pre-pipe line days of the Twenties, and in even greater volume than during any wartime year. Chiefly responsible for the surge in crude oil shipments by rail is the heavy production of the prolific Permian basin on the T. & P.'s lines in western Texas, where existing pipe lines are taxed to their limit.

Approaching the 1928 all-time high, when 85,000 carloads of crude oil originated at three West Texas points, the 1947 movement, which commenced in volume this spring, had passed the 40,000-car mark before October 1.

The new boom traffic originates chiefly at Midland, Tex., and Big Spring, on the T. & P. main line. Other points of origin include Wink, Tex., and Jal, N. M., on the Texas-New Mexico branch. Traffic originating at Midland is moving to East Texas and Illinois, while traffic originating at the other three points is being shipped also to refineries in Indiana and Canada. Most shipments are in solid trainloads of 50 to 65 cars and the total movement averages about 300 carloads a day.

The T. & P. has assigned its 2-10-4 type steam locomotives, augmented by some of its lighter motive power, to the task of moving this sudden expansion of traffic. Principally through the use of lightweight nickel steel driving rods, installed at the road's Marshall (Tex.) shops just prior to the war, the speed of these powerful freight engines, which develop 97,900 lb. tractive force, was stepped up from 45 to 60 m. p. h. In order that sufficient locomotives of this type could be released for assignment to the crude oil traffic, lease of three locomotives from other railroads has been necessary, and in the month of June alone, 142 train-service employees were added to the T. & P. payrolls to man the oil trains.

Notable factors influencing the heavy tank car shipments are the increased shift of eastern consumers from coal to oil, due partly to the narrowing cost differential; more general acceptance of West Texas "sour" crude by refineries



Unprecedented crude oil shipments originating on the Texas & Pacific at Midland, Tex., Big Spring, Wink, and Jal, N. M., totaled over 40,000 carloads during the period April to October, 1947

which formerly were geared principally to process sulphur-free sweet crude; and the volume of production in excess of pipe line capacity. It has been asserted by oil men that the United States is using 300,000 gal. more gasoline every day than it did in the years preceding World War II.

T. & P. tank car movements have been further influenced by the shipment of unfinished gasoline at trainload rates (see *Railway Age*, May 3, page 903) from Big Spring to blending plants at Abilene, Tex., Sweetwater and Orme. These trainload rates were established on a one-year experimental basis to determine whether or not rail shipments by tank car could effectively compete with pipe lines.

Thirty-three trains of 20 cars each have moved since this arrangement was put into effect eight months ago. Eight of these trainloads moved in the month of September.

How Railroads Look Investment Wise

(*Continued from page 30*)

of their stocks and bonds. I recently had occasion to figure up the market value of all of the securities of the Seaboard which was reorganized last year. I found that the equipment obligations and first mortgage fixed interest bonds were selling for about $45 millions; the income bonds for about $34 millions; preferred stock for about $7 millions; and the common stock for about $14 millions; a total of about $100 millions. At the end of last year, the company had net current assets of $41 millions and capital and maintenance funds of about $26 millions; a total of about $67 millions. On the basis of the market value of all of its securities, all assets other than the net current assets and the two cash funds just mentioned were valued at about $33 millions. This is but a fraction of what the equipment alone is worth, not to mention the 4,000 miles of road and other facilities owned.

Of course, it has been a long time since railroad security prices bore any close relationship to the liquid and fixed assets represented thereby. However, it should be reassuring to Seaboard security holders to know that their securities are selling for prices that represent but a small fraction of what it would cost to replace the property represented.

Along the same line, it may be of value to compare earnings retained in various companies in the past ten years with the market values of their bonds and stocks. To cite a few instances, Santa Fe in the past ten years retained $176 millions of earnings in the company. If to this figure be added 80 per cent of amortization charges—on the theory that emergency defense facilities, consisting chiefly of standard equipment which has been fully written off, have experienced depreciation of no more than 20 per cent—we arrive at a figure of retained earnings of $259 millions. This compares with funded debt of $229 millions at the end of 1946 and on the common stock alone is the equivalent of $106 per share compared with a market price of around $80 per share. On the same basis, we find Illinois Central's last ten years retained earnings, plus 80 per cent of amortization charges, to be the equivalent of $84 per share of common stock compared with a price around $25. In the case of Northern Pacific, the figure is about $42 per share compared with a price of $19; for Southern Pacific, about $82 per share compared with the price of stock around $42. For Kansas City Southern, the figure is about $60 per share i.e. about three times the price of the stock.

Summing up—it can readily be seen that the railroad "rough diamond" has many facets. That there are features of weakness is undeniable. But there are also important features of strength. In the longer run, the latter will presumably dictate the price pattern, but this may not come about until some of the current unsatisfactory pressures have been removed. This will not happen overnight. Until they have been removed it would seem advisable not to get too bullish on market strength and not to get too bearish on market weakness. Long term bullishness on the railroads appears advisable, but I'd tend to restrict long-term purchases to periods of gloom. Despite the price adjustments of the past year, many railroad issues still seem under-valued or over-valued in relation to the Diesel fleet annually.

Gas-Powered Comet "Mototruk"

The Comet Manufacturing Company, 9253 Nicollet avenue, Minneapolis, Minn., has announced the development of a gasoline engine-powered hand truck. This "Mototruk," as it is called, was designed for use where hand trucking is necessary but where there is little need for a three or four-wheel power truck.

Comet "Mototruk" negotiates the grade while the operator merely guides it

The "Mototruk" is said to have plenty of power for handling loads up to 1,500 lb. It also is supposed to be able to negotiate steep inclines and to go over obstacles with a full capacity load, without undue strain on the operator. The hand truck itself is of conventional design but made to accommodate heavier loads than the ordinary type.

Pullman-Standard Delivers First Box Cars Built to P-S-1 Design

New 50-ton units, constructed mainly of welded open-hearth steel, weigh 45,500 lb., light, and embody many new features

THE new P-S-1 box cars, now being supplied to railroads by the Pullman-Standard Car Manufacturing Company, are 50-ton, 40-ft. 6-in. general-purpose cars which are built primarily of welded, copper-bearing, open-hearth steel and have a nominal light weight of 45,500 lb. About 14,000 of these cars have been ordered to date by 13 railroads and 1,500 have been completed at the company's Michigan City, Ind., plant, the first car delivered in regular production off the assembly line being the Lehigh Valley car illustrated.

To an unusual degree, the P-S-1 box-car design incorporates component parts, engineered and manufactured by the car builder with the objective of controlling production and assuring rapid delivery of cars at reduced unit cost. The unit-design cars are also expected to prove exceptionally sturdy and durable in service with attendant savings in maintenance cost and reduced out-of-service time for repairs.

General Dimensions of P-S-1 50-Ton Box Car

Length inside	40 ft. 6 in.
Length over strikers	41 ft. 10 in.
Length between truck centers	30 ft. 10 in.
Width inside	9 ft. 2 in.
Height inside	10 ft. 6 in.
Height, rail to floor	3 ft. 7¾ in.
Side-door opening, width	6 ft. 0 in.
Estimated light weight*	45,500 lb.

* With chilled tread wheels, pine floor, pine framing and fir lining.

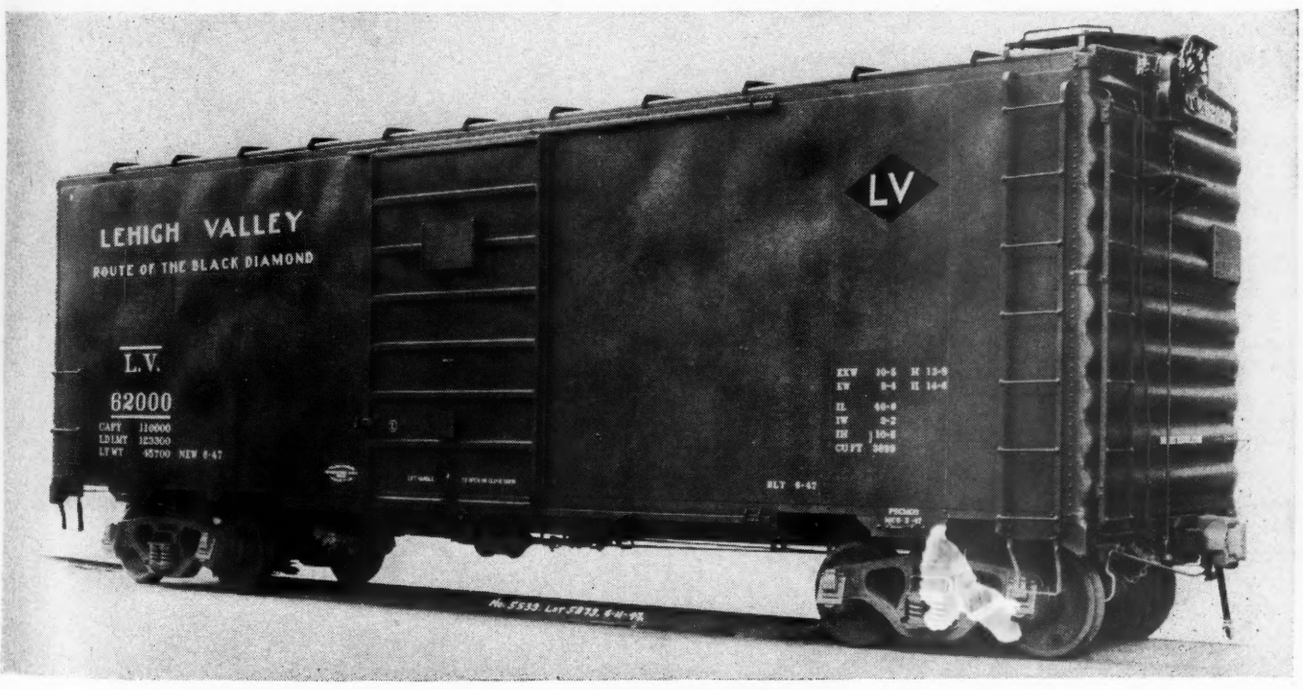
Major Pullman Features

Among the major Pullman-developed features and innovations in the P-S-1 car are: The underframe with welded draft sill, built-up welded bolsters and continuous floor stringers, all arc-welded; automatic arc-welded sides with sheets placed on the outside of Z-bar side posts, side plates and side sills and continuously welded in place; two-part riveted ends, with 4-in. deep corrugations spaced 12 in. on centers; either arc-welded or riveted roof with carlines projecting up on the outside of the car; arc and spot-welded side doors with overlapping corrugations for strength and rigidity; and numerous other smaller items, as shown in one of the tables.

Parts of the P-S-1 car purchased as specialties from other manufacturers and suppliers include: air brakes, hand brakes, running boards, draft gears, couplers, truck frames, bolsters, brake beams and other parts also listed in a table.

All materials used in the car, as well as design features, conform to A.A.R. specifications and strength requirements. All mild open-hearth steel shapes, plates, bars and sheets, ¼ in. and less in thickness, are copper bearing. The side-sill and end-sill angles also are made of copper-bearing steel. Lumber for the framing, decking and lining is southern yellow pine, Douglas fir, or western hemlock.

The center sills are A.A.R. Z-26, 36.2-lb. sections with the top flanges hand arc-welded together the full length of the car. The draft-sill construction is the latest Pullman built-up design including draft lugs, bolster center fillers, strikers and coupler carriers. The



First P-S-1 box car built in production

forged, tapered section to fit the slope of the bolster and made of 0.40 to 0.55 per cent carbon steel. The side-bearing clearance is adjusted within the limits of ⅛ in. to ¼ in. at each bearing, or a total of ¼-in. to ½-in. at each end of the car.

Draft keys are 0.40 to 0.55 per cent carbon steel, 6-in. by 1½-in. round edge section, quenched and tempered. Draft-key retainers are A.A.R. T-head, secured with commercial spring cotters.

Brake equipment is the standard AB-1012 freight-car schedule, including the latest release-control retaining valve and air brake hose with FP-5 couplings. Braking power is 18.7 per cent of the gross rail load based on 50-lb. cylinder pressure. All brake pipe is extra-heavy

Left—Arc-welding operations on one of the underframes. Below—Car side sheets ready for assembly in the welding machine

coupler-carrier wear plate is drop forged, A.A.R. standard.

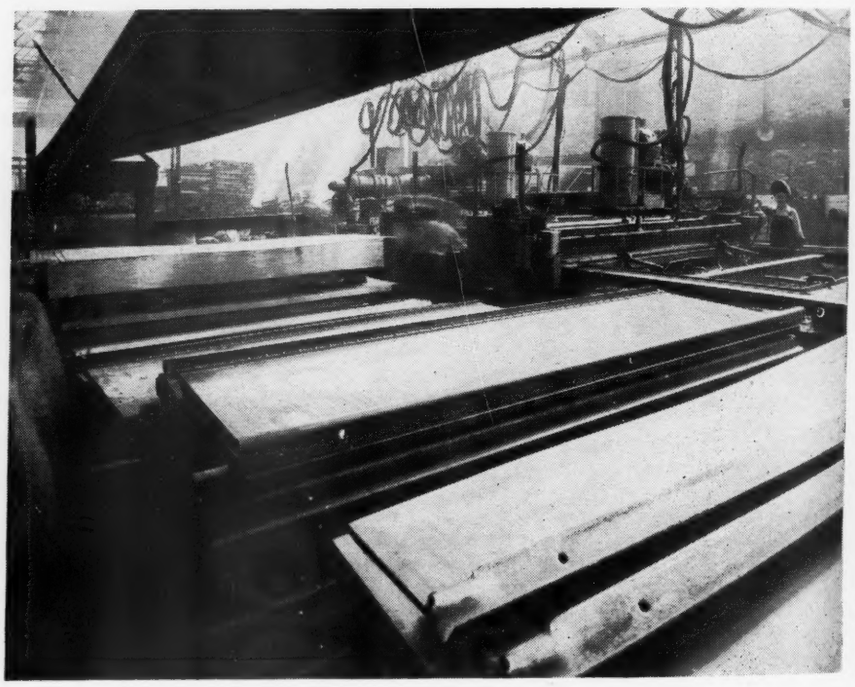
Built-Up Body Bolsters

Body bolsters are built-up arc-welded design, forming an integral construction with the center sill. The top and bottom cover plates are 21 in. by 7/16 in. and webs are ¼ in. thick. The top cover plate extends continuously from side to side of the car. The bottom cover plate extends from the side sill to the toe of the bottom flange of the center sill. A separate bottom plate extends under the center sill and ties the two bottom cover plates together. Side-bearing braces are formed of 5/16-in. inverted U-shape pressings welded between the bolster webs. The bolsters are connected with rivets to a side-sill connection member which is a 6-in., 15.3-lb. ship channel.

Two crossbearers per car are located near the door posts, built up and arc welded with ¼-in. webs and 8-in. by 5/16-in. top and bottom cover plates. The top of the crossbearer is contoured so that the floor stringers are supported on the top cover plate which permits the stringers to run continuously between body bolsters.

Four crossties per car, located between crossbearers and bolsters, are made of 3/16-in. pressed plate flanged all around and riveted to the center and side sills. Four center-sill separators are 3/16-in. pressings, located at the crossties, and two are ¼-in. weldments, at the crossbearers.

The floor stringers are 3-in. 6.7-lb. Z-bars, two on each side of the center sill. The stringers are continuous in one length between body bolsters, passing over the top of the crossties and crossbearers. They are also placed between the bolster and the end sill, two on each side of the center sill. Stringers are connected by welding to the underframe cross members and by riveting to the end-sill angles.



Body center plates are drop-forged A.A.R. design, secured with ⅞-in. rivets. Body side bearings are rolled or drop

black steel, except the train-line end nipples which are 10 in. long of standard-weight black-steel pipe. All pipe fittings are extra heavy and couplings are wrought iron or steel.

Side and End Construction

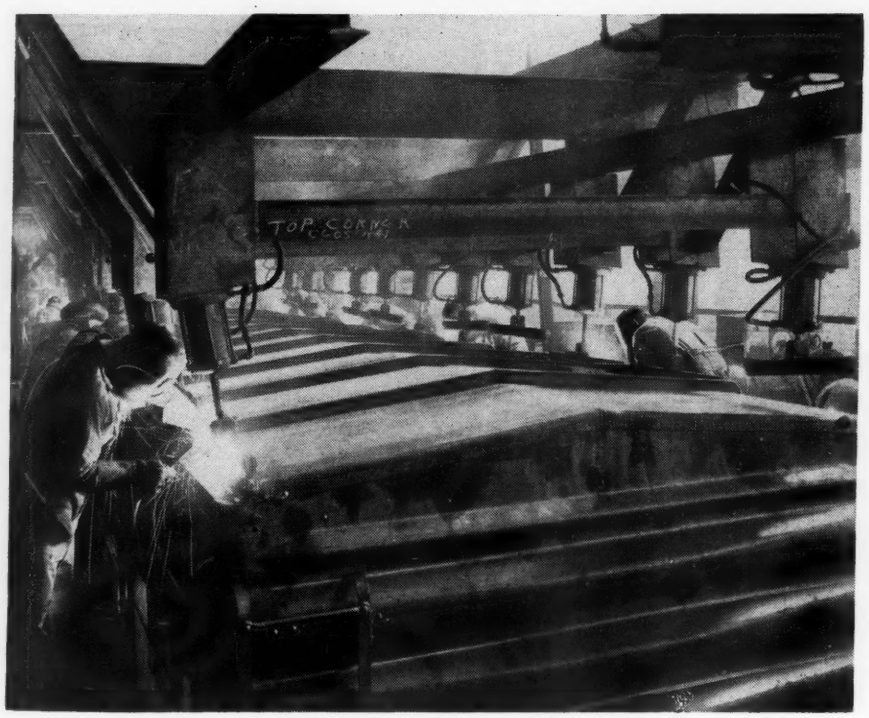
Car sides are the Pullman automatic-arc-welded type in which the side sheets are butt welded together at and to the outer flange of the Z-bar side posts.

The sheets are placed on the outside of the side plate and side sill and are continuously arc-welded in place. The side sheets, 0.10 in. thick, are riveted to the door and corner posts. Side plates are A.A.R. W-section S-281, 9.9-lb.

Side sills are 6-in. by 3½-in. by 5/16-in. rolled angles extending from end to end of the car. The side sill under the doorway is reinforced with a 5/16-in. pressed angle, arc-welded to the bottom of the side sill.

Intermediate side posts are 3-in. 5.1-lb. rolled Z-bars, section Z-27, sixteen per car. Corner posts are 3/16-in. Pullman-design pressings with the diagonal corner-member arc-welded to the inside of the steel end. Door posts are 4-in. by 3-in. by ¼-in. angle sections pressed into channel form.

Door-post gussets of ¼-in. plate connect the door posts to the side plate and side sill. Side-door threshold plates, 3/16 in. thick, rest on the wood floor, being bolted to the side sill and flanged at the front edge.



Above—Car roof being applied as a unit to the car body. Left—Partial view of the car end and roof hold-down jig

The car ends are made in two sections riveted at the center seam, to the end sill, and to the roof. All corrugations except the top one are 4 in. deep, spaced on 12-in. centers. The bottom section is ¼ in. thick and has five corrugations. The top section is 3/16 in. thick and has four 4-in. corrugations and one 2-in. corrugation. End sills are 6-in. by 3½-in. by 5/16-in. rolled angles extending from side to side of the car and applied with the 6-in. leg horizontal. The horizontal members of the side and end sill angles are adequately joined together with ¼-in. gussets. Top corner caps of ¼-in. plate, formed to reinforce the top corner of the car, are riveted and welded to exclude weather. The car has no push-pole pockets.

Car roof sheets are No. 14 gage steel sheets joined together on the carlines and secured in place by arc welding in the welded roof design. The sheets are applied on top of the flange of the W-section side plate and connected by arc welding. The sheets at each end of the car are flanged down and are riveted to the face of the steel end.

Carlines are 2¾-in. by ¼-in. bulb-sections extending across the car. Each carline extends down and is welded to the upper vertical leg of the side plate. Carlines are spaced to accommodate

Parts of P-S-1 Box Car Made or Supplied by Pullman

Car Body Parts

Roof
Ends
Side doors and fixtures
Uncoupling device
Side plates
Strikers, draft lugs and center fillers
Floor clips
Body center plates
Ladders and grab irons
Draft-gear carriers
Body brake pins
Cardboard brackets and bindings
Body brake-rod jaws
Body brake levers
Angle-cock holders
Retaining-valve anchor
Defect-card holder, A. A. R.
Pipe clamps
Branch-pipe T-anchor
Draft-key retainers

Truck Parts

Journal-bearing wedges
Brake pins
Axles, 5½-in. by 10-in. journals
Wheels, 33-in. chilled tread
Brake-lever connections
Brake-beam hangers
Brake levers
Brake-shoe keys, A. A. R.
Brake-beam safety-guard angles
Brake-beam leveling links

Application of the side door to one of the car bodies

P-S-1 Box Car Parts Purchased as Specialties

Body Specialties

Air brake, AB 1012
Running boards and brake steps
Hand brakes, vertical wheel
Draft gears, friction type
Couplers, cast steel Grade B
Coupler yokes, cast steel Grade B

Truck Specialties

Brake beams A. A. R. No. 15
Brake-beam-hanger wear plates
Dust guards, leather fiber
Dust-guard plugs, asphalt cement
Journal bearings, 5½ in. by 10 in.
Journal-box lids, pressed steel
Side bearings, single roller
Springs and spring plates
Frames, cast steel Grade B
Bolsters, cast steel Grade B
Brake shoes
Waste and oil

standard lengths of running boards. Running-board saddles are ⅛-in. steel, flanged and arc-welded to the top of the bulb section of the carline.

In the case of the alternate, riveted roof design, the No. 14 gage galvanized roof sheets are flanged and joined together by riveting within a hair-pin type of seam cap. The sheets are flanged down and riveted to the upstanding vertical leg of the side-plate Z-bar and to the face of the steel end.

The seam caps, pressed from ⅛-in. steel, extend across the car on the outside on top of the roof and are also flanged down and riveted to the vertical leg of the side plate. Seam caps are spaced on 41-in. centers so as to accommodate commercial standard lengths of running boards. The running-board saddles are pressed from ⅛-in. commercial galvanized sheets.

The 50-ton trucks have a wheel base of 5 ft. 6 in. and side-bearing center spacing of 4 ft. 2 in. They are of the spring-plankless type with the truck brake arranged for the brake-lever connection to pass through the truck bolster. The journal boxes have integral waste-retainer ribs. Axles are A. A. R. standard 5½-in. by 10-in., Grade A, mounted in 33-in. chilled car wheels. Brake-beam hangers are standard loop-type forgings and the truck-brake lever connections are one-piece forged design. Brake-beam safety guards are double 3-in. by 2½-in. by ¼-in. rolled angles riveted and welded to brackets at the bottom of the truck bolsters. Brake-beam leveling links of spring steel are provided.

Coach Hydrant

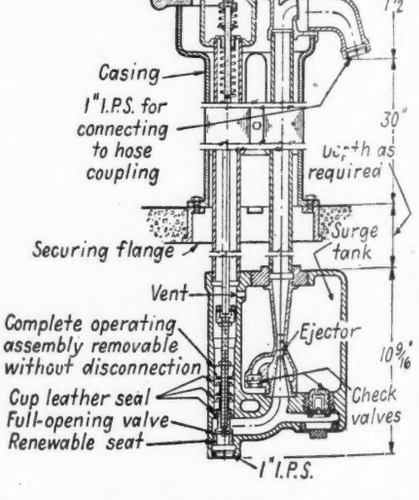
A non-freezing, post-type hydrant designed exclusively for coach-watering purposes, which is said to conform to the revised provisions of the United States Public Health Service, is now being offered by the J. A. Zurn Manufacturing Company, Erie, Pa. This hydrant is said to assure continuous operation in the coldest weather by operating on a dry-pipe principle, which permits the water from its riser pipe, which is above ground, to return after operation to a surge tank located beneath the frost line.

Each time the hydrant is used, the surge tank is emptied by a built-in ejector. Check valves are said to protect the operating cycle against any possibility of flooding under extreme back pressures, or from the return of excess hose water.

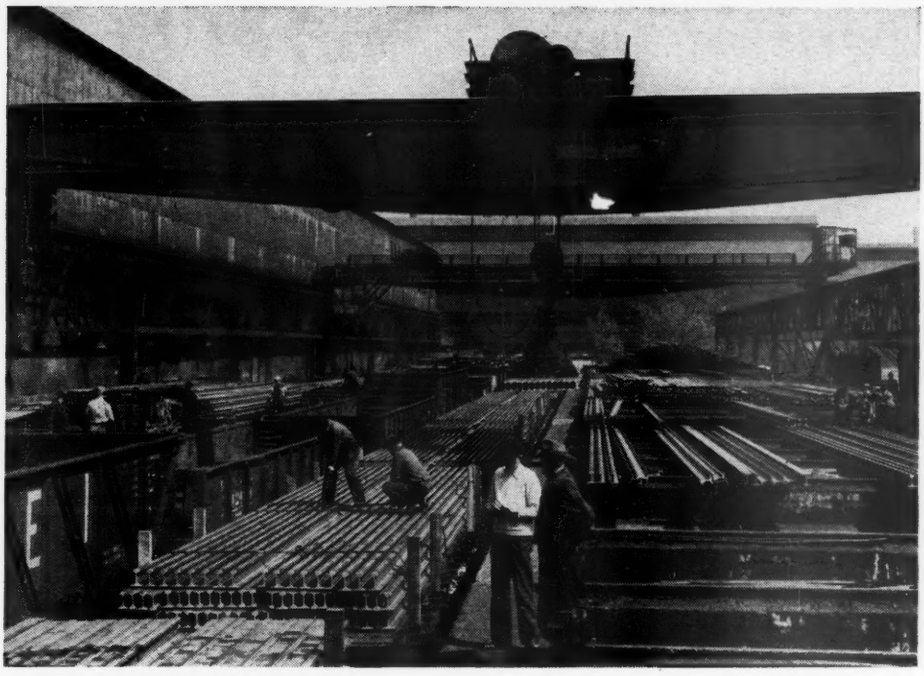
The surge tank and operating valve assembly is built as a unit which is attached at its bottom to the water supply pipe. Two pipes are attached to the top of this unit. One, a riser pipe, receives the water from the ejector and conveys it through a swing check valve located at the top of the pipe to an outlet spout to which the hose may be coupled. The other pipe encloses a rod and spring mechanism by which a handle at the top of the hydrant can operate the valve. This operating valve is called "quick acting" because it has only two positions — fully-opened and fully-closed. This feature is said to assure positive emptying of the surge tank. When the valve is closed, residual water in the riser pipe drops into the surge tank below the frost level.

A cast iron casing entirely surrounds all the pipes and mechanisms that are above ground, except the valve handle and delivery spout. This casing is bolted to a "securing flange" which is set in concrete at the ground level and through which the pipes lead from the surge tank unit. The designers claim that this construction makes cross connection to sewers not only unnecessary but impossible.

The surge tank unit, if desired, can be used in connection with a service box, flush with the ground level, for enclosing the valve handle and water outlet.



Cross-section of the Zurn post-type coach hydrant



U. S. Steel photo

Rail-mill shipping yard at the Gary (Ind.) works of the Carnegie-Illinois Steel Corporation

Sharp Decline in 1946 Output of Rails and Fastenings

REGISTERING a decided drop from the 1945 total, the production of rails in the United States in 1946 amounted to 1,965,642 net tons, a decrease of 451,878 tons, or 18.7 per cent, according to the 1946 annual statistical report of the American Iron & Steel Institute. Thus 1946 was the second successive year in which rail production has registered a decline. Furthermore, the tonnage produced in 1946 is the lowest recorded since 1941, when 1,927,851 tons were produced.

In the table showing the production of rails from 1927 to 1946, inclusive, the output for each year is broken down into four weight groups. It will be noted that, relatively, the two heaviest groups continued to hold their own, accounting for 80 per cent of the total output for 1946 as compared with 79.2 per cent in 1945. A significant aspect of the production for 1946 is that the tonnage of rails weighing 120 lb. and over was the largest of any of the four groups for the first time, except in 1933, registering 40.4 per cent of the total production, as compared with 38.5 per cent in 1945. On the other hand, the group weighing 100 lb. and less than 120 lb. decreased from 40.7 per cent of the total production in 1945 to 39.6 per cent in 1946.

The heaviest group suffered the least relative decline in production last year. Specifically, production of this group decreased from 930,987 tons in 1945 to 794,775 tons in 1946, a loss of 14.6 per cent. On the other hand, production of the group weighing 100 lb. and less than 120 lb. dropped 21 per cent; the group weighing more than 60 lb. and less than 100 lb. showed a decrease of 23.1 per cent; and that weighing 60 lb. or less dropped 18.5 per cent.

Of the total tonnage of rails produced in 1946, 1,900,252 tons, or 96.6 per cent, were rolled from open-hearth steel, compared with 97.2 per cent in 1945. No rails were rolled from Bessemer and electric steels in 1946 compared with 5,835 tons rolled in this classification in 1945. On the other hand, there was a doubling of the open-hearth rolling from new seconds, which increased from 6,505 tons in 1945 to 13,518 tons in 1946. Also included in the total output for 1946 were 51,972 tons rolled from old rails and 21,114 tons of girder and high-tee rails.

The output of fastenings in 1946 showed approximately the same sharp reduction as in rails, dropping from 784,843 tons in 1945 to 643,337 tons in 1946, a decrease of 18 per cent. The total output of fastenings in 1946 included 151,149 tons of joint or splice bars, 42,043 tons of other rail joints and 450,145 tons of tie plates.

Production of Rails by Weight per Yard—Net Tons

Years	60 lb. or less	Over 60 and less than 100 lb.	100 and less than 120 lb.	120 lb. and over	Total
1927	*181,256	†798,226	1,472,155	691,627	3,143,264
1928	*150,301	†662,053	1,348,199	804,639	2,965,192
1929	*158,326	†574,080	1,381,631	934,758	3,048,795
1930	*107,101	†391,079	935,756	664,085	2,098,021
1931	* 56,100	†166,793	555,242	518,546	1,296,681
1932	* 18,654	† 47,374	240,902	143,944	450,874
1933	55,010	63,153	172,488	175,601	466,252
1934	78,495	101,640	550,639	400,677	1,131,451
1935	63,982	112,431	381,696	238,812	796,921
1936	107,644	135,585	684,910	438,089	1,366,228
1937	113,889	218,374	815,280	471,685	1,619,228
1938	50,375	85,177	371,534	190,556	697,642
1939	92,994	83,611	620,992	515,050	1,312,647
1940	140,443	339,672	688,109	510,762	1,678,986
1941	172,264	323,968	820,695	610,924	1,927,851
1942	124,938	438,562	924,851	607,808	2,096,159
1943	164,096	364,715	847,839	750,346	2,126,996
1944	162,942	401,213	1,032,256	894,245	2,490,656
1945	150,724	350,499	985,310	930,987	2,417,520
1946	122,739	269,720	778,408	794,775	1,965,642

* Under 50 lb. per yd.
† 50 and less than 100 lb. per yd.

Prevention and Control of Fires Subject of Two-Day Meeting

Some 200 attend A. A. R.'s Fire Protection and Insurance Section meeting at Chicago October 23-24 — Discuss fires in freight cars

THE shaping of a program aimed at the installation of "No Smoking" signs inside, or on, all box cars, and timely advice on how railroads should handle ammonium nitrate fertilizer of the type which figured prominently in the Texas City (Tex.) explosion and fire last May, were among the many matters which held the attention of some 200 railroad fire protection and insurance officers in Chicago last week. The meeting was that of the Fire Protection & Insurance Section of the Association of American Railroads, held at the Stevens hotel on October 23 and 24, and attended also by representatives of insurance firms and fire control equipment manufacturers.

L. J. Molloy, superintendent of insurance of the Seaboard Air Line, who presided at the meeting as chairman of the section, proposed the "No Smoking" program as "one that won't cost a lot of money, but promises a large return on what it may cost." He said that fires in freight cars represent about 40 per cent of the frequency and about one-third of the dollar loss suffered by railroads as a result of fires. Further, Mr. Molloy pointed to the shortage of freight cars as evidence of the need for such a program. A weak spot in the prevention of freight car fires, he asserted, is apparent in the large amount of freight tonnage handled away from railroad supervision—at plants, private sidings and team tracks—where there may be no "No Smoking" signs in or about any box cars.

In support of Mr. Molloy's proposed program, the section approved recommendations to the General Committee of the A. A. R. that all railroads:

(1) Amend their specifications for new box cars, including any now on order, to include the stenciling of the two words "No Smoking" (in about four-inch letters) on the inside walls (about eye-level from the car floor) adjacent to doors;

(2) With their own forces add such stenciling when and as any other stenciling or re-stenciling is done in any (owned) box car;

(3) Each railroad, at its own discretion, individually should consider the benefits possible of attainment by specially so stenciling their other box cars, and act accordingly. It has been estimated that the cost of such stenciling would be about 35 cents per car.

Ammonium Nitrate

A talk on the handling of ammonium nitrate fertilizer, by Dr. W. G. McKenna, chief chemist of the Bureau of Explosives, A. A. R., provoked much interest and discussion among those in attendance. While warning that ammonium nitrate is a hazardous chemical and should be handled with reasonable caution, Dr. McKenna pointed out that many conflicting statements have been published recently regarding the product. He assured the section that the Bureau of Explosives and other reputable laboratories "are making every effort to clear up some of these differences and to distribute information that is entirely consistent with facts."

"During the last four or five years," Dr. McKenna said, "the railroads have moved something over a million tons of this chemical. It has been subjected to all the conditions of rail transportation, but we have never had an accident that even approached explosive violence. In each case the fire proceeded until the combustible matter was consumed and then died out, or if water was applied in sufficient quantity, the fire was extinguished and the decomposition was arrested without dangerous consequence."

In this connection, Dr. McKenna referred to a report, in three parts, by the Inter-Agency Committee on the Hazards of Ammonium Nitrate Fertilizer, of which he is a member. Published by the Treasury Department and the U. S. Coast Guard, it states that experiences "in land transportation and storage indicate that the amounts involved, or the type of vehicle or warehouse, do not contribute to confinement of products of decomposition or to the building up of pressure and temperature to the degree necessary to cause an explosion. The foregoing does not have applicability to ammonium nitrate in its manufacture, processing, or in storage with high explosives."

The speaker said that Part II of the report, now nearing completion, is devoted to the hazards of ammonium nitrate fertilizer in land transportation, and in storage under various conditions. This report, to be available soon, will be helpful to railroad officers in the handling of the chemical, he stated.

Continuing, Dr. McKenna asserted that experience indicates the "disastrous hazard of the material, when it is involved in a fire in transportation, is a function of certain conditions that are peculiar to a ship's hold or similar structure and are not realized in a freight car." He warned that the dangers lay principally in placing the ammonium nitrate in a confined space, then subjecting it to fire, either in the material itself or in an adjacent compartment which might conduct sufficient heat to make the product unstable in its confined space.

The speaker outlined the following precautions in transporting ammonium nitrate:

(1) Keep fire away.

(2) If there is a fire, give it all the ventilation possible (when in a freight car, open the doors, if possible).

(3) Deluge the fire with water (extinguishing chemicals such as CO_2, foam, etc., are not particularly effective for this type of fire).

(4) Don't go nearer the fire than necessary without a gas mask suitable for nitric oxide gases.

(5) Don't sweep up and re-bag ammonium nitrate which has been spilled.

In connection with the latter precaution, Dr. McKenna said spillings should be flushed down a sewer, dropped into a body of water (if lawful) or buried in the ground and the area wetted.

Diesel Protection

R. J. Snowdon, supervisor of fire prevention of the Seaboard Air Line, reiterated precautions for the protection of Diesel locomotives from fire, which he advanced last May before the Railroad Section of the National Fire Protection Association (see *Railway Age* of June 7, page 1178). "Thorough cleaning is necessary if fire is to be controlled," he stated. "Some changes in and simplicity of design will be required if thorough cleaning is to be made possible and economical. Sound

operation involving reasonable layovers at terminals should be considered and some sort of effective fire protection suitable for use inside and outside of locomotives should be installed." He emphasized the importance of using some type of fire detection device.

Referring to the many conversions from coal to oil-burning locomotives, Mr. Snowdon told the section that not only should the locomotive be equipped with some kind of fire protection, but that the fueling stations should be so equipped. Regulations should be formulated concerning the use of open flame lights and smoking around fueling stations and oil-burning locomotives while being fueled.

To combat hazards associated with Diesel repair shops and fueling stations, L. R. Morgan, fire protection engineer of the Michigan Central, reporting for the Committee on Fixed Properties, advanced the following precautions:

(1) Don't permit the use of flammable solvents for cleaning purposes.

(2) Keep cleaning rags and waste in covered metal can.

(3) Give attention to the selection of proper hose and nozzles for the safe refueling of Diesels.

(4) In instances where existing facilities are converted to Diesel service, study the electrical wiring system so that the capacity of the system will not be exceeded and install vapor-proof globes where required.

H. P. DeVoll, chief engineer of the Mutual Fire, Marine & Inland Insurance Co., discussed briefly the fire resistive features of the Norfolk & Western piers near Norfolk, Va. (outlined in detail in a feature article in the *Railway Age* of July 5, page 49). He asserted that the N. & W. is "showing the way" in pier construction. He also told the section of that railroad's experimental locomotive designed to eliminate set-out fires caused by dropping of hot coals from the ash pan area or the front end (see *Railway Age* of July 19, page 49). A test of this engine, he said, has shown it to be safe to operate in pier sheds or merchandise warehouses at all times. It can operate under restricted or dead-fire conditions for periods up to one hour duration—ample time to enable the crew to remove all rolling equipment units from the pier or piers, Mr. DeVoll declared.

Other Reports, Talks

The bonding of railroad employees was discussed by Peter A. Zimmermann of the Towner Rating Bureau, Inc., who urged that every railroad, in the light of present-day conditions, review the fidelity coverage on its employees. He pointed out the advantages of the "railroad blanket bond," which covers every employee of a railroad in the full amount of the bond. This type of coverage should be maintained, he stated, because of (1) frequent changes in personnel; (2) increased handling of money; and (3) increased value of property entrusted to the care of or belonging to the railroad.

In a talk on "Free Enterprise vs. Government Bureaucracy in Insurance," J. C. Leibig, assistant vice-president of the Continental Casualty Company, labeled the so-called Crosser amendments to the railroad employee "protection" legislation as "another example, and a successful one, of the invasion of private enterprise by government bureaucracy." Other talks and reports were given by the following: J. H. Kaufmann, auditor, insurance bureau, Great Northern, for the subcommittee on fire prevention bulletins, who reported on the effective employment of monthly illustrated fire prevention bulletins by the G. N. and the Southern; J. R. MacDonald, Railroad Insurance Association, who discussed fire precautions in tie storage yards, advancing timely advice on selecting a site, piling, housekeeping, fire protection and watch service; and W. S. Wicker, chief engineer, Transportation Mutual Insurance Company, who, in reporting on the highlights of a year's fire inspections of railroads, declared that more attention is needed toward electrical hazards, maintenance of fire protection equipment and the cleanliness of premises. A. M. Schachtner, insurance supervisor, Norfolk & Western, reported for the Committee on Records and Statistics, and J. R. Peters, assistant manager, insurance department, Pennsylvania, gave the report of the Insurance Committee.

During the course of the meeting, those in attendance viewed two motion pictures dealing with fire—a Paramount newsreel of the Texas City disaster and a naval film on the chemistry of fire. At the closing session, Mr. Molloy announced that the proceedings of the annual meeting—to be printed in an extra edition of the news letter—will be available in December.

Electro-Motive Silver Anniversary

(*Continued from page 28*)

to reproduce or duplicate field conditions accurately enough to be sure that the particular item being developed will come up to the standards expected by the railroads. This makes it necessary to do an extensive amount of field testing of almost every new item. As a consequence, to design and develop an item completely enough so that it can go into production often will take as long as three or four years. Many more complex development programs in which improvements can be made in orderly steps may take as much as ten years to complete. As an example of this, a change in the lubrication of traction-motor bearings was recently incorporated in 100 motors and actually operated for a total of 22 million motor-miles in every known type of railroading before being approved for incorporation in a new model locomotive. A change in insulating material and manufacturing methods in the traction motor requires about the same amount of field testing.

* * *

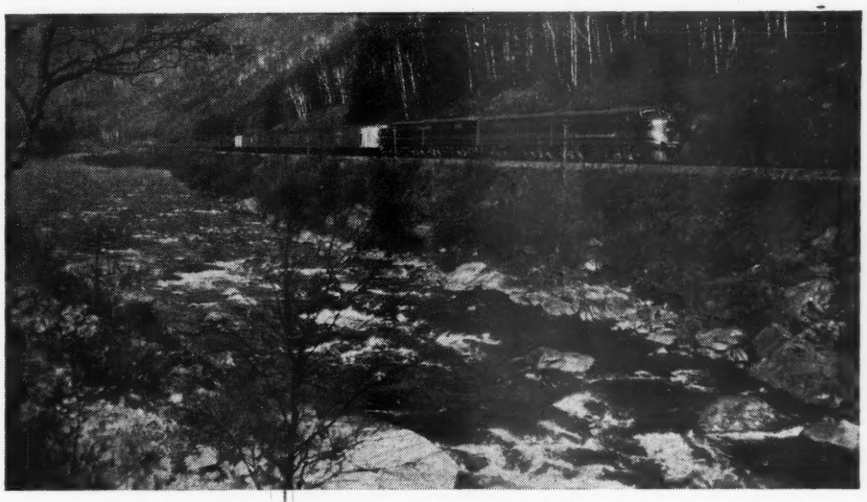


Photo courtesy of Albert G. Hale

Boston & Maine freight train just east of Hoosac tunnel

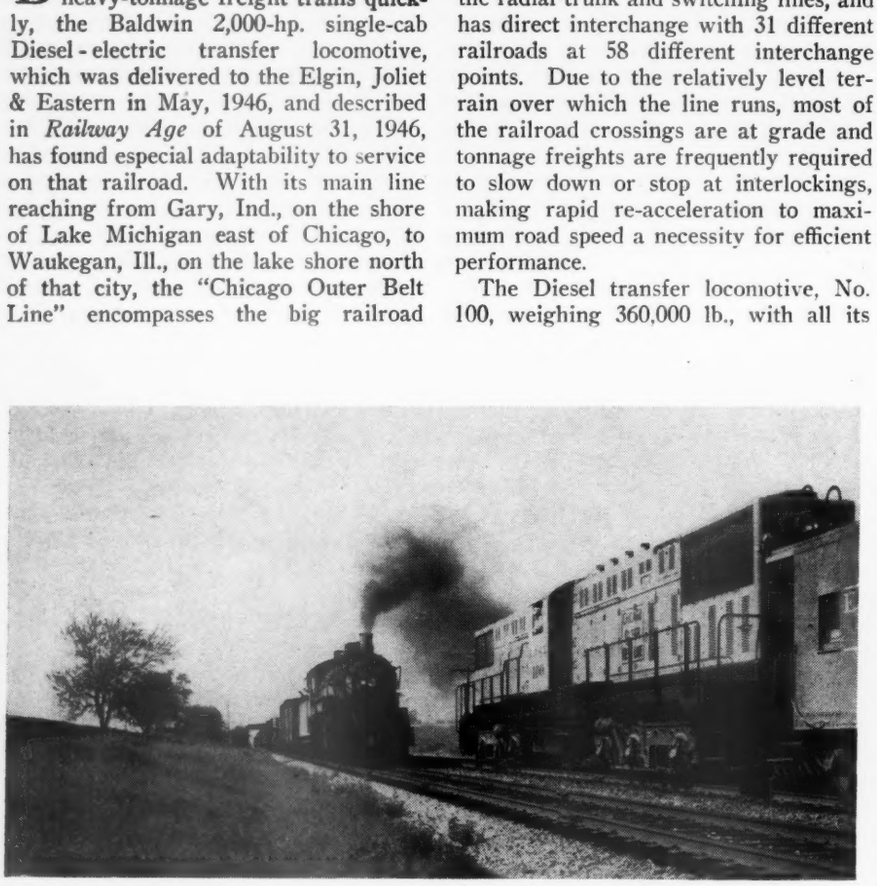
Heavy-Duty Transfer Diesel Follows Path of Most *Resistance*

2,000-hp. single-unit locomotive is dispatched where tonnage is greatest—Eliminates helper services and increases maximum train tonnages on Chicago Outer Belt

BECAUSE of its ability to accelerate heavy-tonnage freight trains quickly, the Baldwin 2,000-hp. single-cab Diesel-electric transfer locomotive, which was delivered to the Elgin, Joliet & Eastern in May, 1946, and described in *Railway Age* of August 31, 1946, has found especial adaptability to service on that railroad. With its main line reaching from Gary, Ind., on the shore of Lake Michigan east of Chicago, to Waukegan, Ill., on the lake shore north of that city, the "Chicago Outer Belt Line" encompasses the big railroad center like a dragnet, crossing all of the radial trunk and switching lines, and has direct interchange with 31 different railroads at 58 different interchange points. Due to the relatively level terrain over which the line runs, most of the railroad crossings are at grade and tonnage freights are frequently required to slow down or stop at interlockings, making rapid re-acceleration to maximum road speed a necessity for efficient performance.

The Diesel transfer locomotive, No. 100, weighing 360,000 lb., with all its weight on its six driving axles, fulfills the need for fast pick-up with heavy tonnage. Rated starting tractive force of the locomotive is 108,000 lb. at 30 per cent adhesion, and the continuous rating is 64,200 lb. at 9.4 m.p.h.

Since receipt of the locomotive, it has been in pool service, being assigned to service where the greatest tonnage is to be moved. Although the E. J. & E.'s longest single road haul is 130 mi., the No. 100 nevertheless accumulated a total of 73,479 mi. in its first 15 months of operation. The usual assignment is to through scheduled freights between Gary, East Joliet, Ill., and Waukegan, 120 mi. Since all through trains are classified at East Joliet, the No. 100, after a mechanical inspection at the East Joliet enginehouse, is promptly relayed to the first tonnage train, not being held for the train it brought in to be yarded. To illustrate the typical performance of the No. 100 in this service, the log for a 24-hr. period (which appears on the facing page), beginning at 4:20 a.m. January 19, is shown.



Left—The Baldwin transfer Diesel, in road service, meets one of its predecessors. The caboose is for test purposes. No. 100 is hauling a tonnage train. Below—E. J. & E. No. 100 packs 2,000 hp. in a single-cab unit. The entire weight of the locomotive is carried on its driving wheels

At 4:40 a.m. on January 20, 20 min. after the second 24-hr. period commenced, No. 100 had started eastward with 11 loads and 79 empties, totaling 2,800 tons. East from the lake shore at Waukegan, there is a ruling grade of 1 per cent, extending 3 mi., which this locomotive negotiates with tonnages up to 3,600 without a helper. The largest E. J. & E. steam power is limited to 1,800 tons on the same grade without a helper, and to 2,600 tons with a 600-hp. Diesel switcher assisting.

Transfer Diesel Is Versatile

When heavy tonnage or accumulation occurs at any point on the system, the transfer Diesel is quickly assigned to the congested area to aid in the speedy restoration of normal conditions. For example, last January the Pennsylvania began a very heavy interchange of Pocahontas coal at Hartsdale, Ind., 13 mi. southwest of Gary. The No. 100 was promptly assigned to handle this traffic and, on January 28, 1947, with the temperature standing at 32 deg., moved 6 loads and 90 empties from Kirk yard, Gary, to Hartsdale, returning with 75 loads of coal weighing 6,375 tons, accomplishing the round trip in 7 hr. 5 min. No switcher is in service at Hartsdale and No. 100 performed its own deliveries and assembly of its own train for the return. Steam power, after disposing of empties at Hartsdale, is required to travel light to Dyer, Ind., 2½ mi. beyond, to take water and turn.

Above—The No. 100 hauls tonnage trains anywhere on the E. J. & E. main line without helper service. Left—Aptly nicknamed the "Chicago Outer Belt Line," the route of the Elgin, Joliet & Eastern encompasses the city of Chicago

	Miles		Cars			Tonnage
			Lds.	Emp.	Total	
lv. Waukegan	0	4:20 a.m.	37	51	88	3,253
ar. E. Joliet	73	8:30 a.m.				
lv. E. Joliet	0	9:55 a.m.	43	26	69	3,447
ar. Gary	47	1:20 p.m.				
lv. Gary	0	4:05 p.m.	42	6	48	3,288
ar. E. Joliet	47	7:15 p.m.				
lv. E. Joliet	0	9:30 p.m.	67	2	69	4,422
ar. Waukegan	73	4:00 a.m.				
	240	23 hr. 40 min.				

No. 100, having dual controls, is able to change its direction of operation without turning the locomotive.

On the following day No. 100 left Kirk yard at 2:00 a.m. with 67 cars, 1,910 tons, which it placed for interchange at Hartsdale, then picked up 69 loads of coal weighing 5,873 tons and returned to Kirk yard, arriving at 8:00 a.m. Recrewed, the locomotive left at 11:15 a.m. with 15 loads and 47 empties, 2,225 tons, and arrived back from Hartsdale at 4:05 p.m. with 52 loads, 4,850 tons. With the third crew in the same calendar day, No. 100 left Kirk yard at 8:10 p.m., moving 54 cars totaling 1,449 tons, and ran to Chicago Heights, Ill., 22 mi., doing its own switching and returning with 64 loads and 5 empties totaling 5,472 tons. Due to traffic congestion, arrival at Gary was not until 8:30 a.m. The train sheet for the following day shows the temperature at 32 deg. and sleet. On this day 2 loads and 137 empties were handled from Gary to Hartsdale, and on the return trip No. 100 handled 72 loads and 4 empties with a record tonnage of 6,400.

The E. J. & E.'s road steam power consists of 59 2-8-2 type locomotives, delivered between 1913 and 1930, and averaging 26 years of age. Rated tractive force of the first 7 of these locomotives is 58,705 lb., while the remaining 52 are rated at 63,467 lb. Weight in working order ranges from 472,000 lb. to 522,000 lb. It will be noted that the tractive force of the latter steam engines is comparable to the continuous rating of the Diesel transfer locomotive, but, due to the higher starting tractive force of the Diesel, trains of much greater tonnage can be handled over the road without helpers, or without serious losses in road time in getting trains under way after stops for pick-ups and set-offs or after interference at crossings.

The transfer Diesel is not limited to transfer or road service. On one occasion No. 100 was loaned to the Chicago & North Western where it humped a single cut of 179 cars weighing 9,542 tons.

Maintenance Costs Low

Maintenance work on the 2,000-hp. locomotive is done at existing facilities in Gary and East Joliet where the road's 77 Diesel switchers are serviced. Repair costs per locomotive-mile for a 7-month period ending December 31, 1946, were 23.9 cents for the No. 100, which compares with an average cost of 40 cents per locomotive-mile for the road's 113 steam locomotives. Fuel costs were 19.4 cents and lubrication costs 2.5 cents compared with 36.45 cents and 0.6 cents, respectively, for the steam locomotive. Fuel costs per 1,000 gross ton-miles showed even larger savings for the

(Continued on page 44)

Officers of the Communications Section, A. A. R., (left to right): W. D. Neil, chairman, general manager of communications, Canadian Pacific; R. C. Thayer, vice-chairman, superintendent telegraph, Great Northern; and W. A. Fairbanks, secretary, Communications Section

New Ideas in Communications

Three-day annual convention of the Communications Section, A. A. R., brings forth news of numerous developments in printing telegraph, telephone train dispatching, radio and train communication

IMPROVED telephone train dispatching, radio on trains, public address systems and caboose power supply for train communication systems were some of the timely subjects discussed during the three-day annual meeting of the Communications Section of the Association of American Railroads, held at the Roney Plaza Hotel, Miami Beach, Fla., October 21 to 23. W. D. Neil, general manager of communication of the Canadian Pacific, as chairman of the section, and R. C. Thayer, superintendent telegraph of the Great Northern, as vice-chairman, presided over the meeting, which was attended by 315 railroad representatives and affiliated members and 122 ladies.

The program included the presentation of reports of nine standing committees, two addresses and eight technical papers concerning recent developments. The addresses, in addition to opening remarks by Chairman Neil, were made by J. H. Aydelott, vice-president, operations and maintenance department, A.A.R., and by C. H. Sauls, general manager of the Seaboard Air Line. The technical papers were: "Some Design Techniques for Improved Performance on Telephone Dispatching Circuits," by L. A. W. East, chief engineer communications of the Canadian Pacific; "Development of Railroad Mobile Communication Equipment," by A. A. Curry, product engineer, Farnsworth Television & Radio Corp.; "Wire Recording and Radio Broadcast for Entertainment Purposes," by P. B. Patton, mobile communications division, Farnsworth Television & Radio Corp.; "Systems and Equipment Design for Maximum Spectrum Utilization in the Mobile Radiotelephone Services," by D. E. Noble, director of research, Motorola Inc.; "Type of Power Supply for Communication Equipment Installed in Cabooses," by E. H. Musgrove, radio engineer, Denver & Rio Grande Western; "Design and Principles of Public Address Systems, Including Two-Way Yard Operation," by William H. Johnson, sales engineer, Webster Electric Company; "Mechanizing Car Records and Facilitating Freight Train Operation by Use of I.B.M. Teletype Machines," by H. H. Woodruff, transportation representative, International Business Machines Corporation; and "Reperforator Switching Systems for Railroad Telegraph Service," by A. F. Connery, central office engineer, and R. F. Dirkes, system engineer, Western Union Telegraph Company.

Most of the papers and committee reports were of a technical nature. Following is a summary of those references of general railroad interest, with brief statements only concerning plans, specifications or technical details.

Abstracts of Addresses

In his address, C. H. Sauls of the Seaboard reviewed the history of railroad communications, and discussed several recent developments, including the use of carrier, superimposed on existing line wires, as a means of splitting dispatchers' districts and locating all train dispatchers in division headquarters. The recent installation of three-channel carrier on a two-conductor underground cable on 247 mi. of the Seaboard between Hamlet, N. C., and Savannah, Ga., was explained. Mr. Sauls further discussed the use of radio telephone communication between yard engines and yardmasters' offices in five yards on the Seaboard, explaining several instances in which this communication had been the

means of expediting service to shippers. (An article concerning radio telephones in the Seaboard yard in Hamlet, N. C., was published in Railway Signaling for October, 1946.)

The use of paging speakers, loud-speakers and talk-back speakers, all controlled by a yardmaster in a tower located centrally in a yard, was explained by W. H. Johnson, sales engineer, Webster Electric Company, Racine, Wis., as being an excellent means of expediting the operations of freight classification yards. He also discussed several of the problems involved in designing circuits and amplifiers, as well as the locations and mountings for loud-speakers when planning extensive installations in yards. (Articles concerning loud-speaker yard communication projects have appeared in the *Railway Age* as follows: Southern at Birmingham, Ala., page 364, August 31, 1946; Kentucky & Indiana Terminal at Louisville, Ky., page 448, March 1, 1947; and the Rio Grande at Salt Lake City, Utah, page 594 March 22, 1947.)

The mechanized system for handling interchange reports, train consist reports and car records which is used by the New York, New Haven & Hartford between its yards at Maybrook, N. Y., and Cedar Hill, Conn., was discussed in an address by H. H. Woodruff, transportation representative of the International Business Machines Corporation. This system combines the use of teletype equipment with punch card machines, as was explained in detail in an article concerning the New Haven project, published in the *Railway Age* of February 23, 1946.

Train Communication

The use of modern electronic techniques to improve the performance of telephone train dispatching was discussed by L. A. W. East, chief engineer communications, Canadian Pacific. He told how the dispatching of extended sections of main tracks, or scattered sections of branch lines, could be concentrated in division headquarters for a large area by applying modern electronic equipment known as carrier current apparatus, by means of which an existing pair of line wires can be used to carry several telephone conversations simultaneously by the application of high-frequency wave bands; in other words, by "wired-wireless." He explained how scattered sections of main and branch lines on a certain division of the Canadian Pacific are dispatched by three dispatchers at a central point during two tricks daily, and how, by operating switches at the office, the territories are regrouped to be handled by two dispatchers during the third trick.

The practicability of using radio on locomotives, cabooses and passenger cars has been improved by special attention to the design of circuits and apparatus, according to an address by A. A. Curry, products engineer, Farnsworth Television & Radio Corp. One good idea, he said, is to build the equipment as separate units, each of which can readily be replaced by any train service employee if it fails in service. To facilitate such replacements, he recommended the use of plug-in connectors which obviate any changing of wire connections. He also discussed the mounting and covers of radio units adaptable to railroad service.

In his paper concerning power supply on the cabooses of freight trains for feeding train communication systems, E. H. Musgrove, radio engineer of the Rio Grande, stated that the choice for this service was between: (1) generators driven by internal combustion engines; and (2) a storage battery. Under the classification of engines that can be used for this purpose, he listed gasoline, propane gas and Diesel. Battery power supply, he said, can be subdivided into: (1) batteries charged at terminals or replaced by charged batteries at terminals; or (2) storage batteries installed permanently on the car and charged by axle-driven generators. Mr. Musgrove stated that the fire hazard with gasoline engines was objectionable. The propane gas engine, he pointed out, is less hazardous than gasoline, but more hazardous than the Diesel. Extensive tests with propane gas engines and Diesels on the Rio Grande led to the adoption of the Diesel. Mr. Musgrove also discussed installation costs, maintenance expenses and service requirements of various systems of power supply on cabooses. His paper will be published in an early issue of the Railway Mechanical Engineer.

Referring to the 60 channels which the Federal Communications Commission has assigned to the railroads for radio telephone service, D. E. Noble of Motorola, Inc., pleaded with the railroads not to waste these channels, and said that the railroads can make no claim today that they are now using these channels effectively. Continuing his extended extemporaneous address, Mr. Noble discussed recent developments to minimize interference between adjacent channels which will be of benefit to railroads in the use of radio.

Sound equipment to reproduce music for the entertainment and relaxation of passengers on trains is now available and in use on several roads, as explained in an address by P. B. Patton, of the Farnsworth Television & Radio Corp. Wire record machines are used so that programs of several hours duration are reproduced automatically. In the dining cars, special music is available during the luncheon and dinner hours. For the club cars and coaches, programs of either popular or semi-classic music are available. (Extensive installations of such equipment on the Santa Fe were described in detail in an article in *Railway Age* of October 4.)

Progress in Beam Radio

The report of the committee on Railroad Radio Communications included an explanation of the progress being made in the use of microwave beam radio as a means of replacing telegraph and telephone circuits now on line wires. According to the report, the Western Union has a beam radio system in service between New York and Philadelphia, and is extending it to include Washington and Pittsburgh. The American Telephone & Telegraph Co. is constructing such a system between New York and Boston, including seven intermediate repeater stations. When discussing the report, F. B. Bramhall, transmission research engineer, Western Union Telegraph Company, stated definitely that the New York-Philadelphia network is now operating satisfactorily as planned, with capacity for 1,000 telegraph channels. He asserted that the beam radio circuits are better than those on open wires, at least better than Western Union open wires. Further construction and operation are required, he said, to determine first costs and operating expenses in proportion to the volume of message traffic being handled.

Appliance Association Exhibits

Coincident with the Communications Section session, various members of the Railway Telegraph and Telephone Appliance Association displayed modern railroad communications equipment in a total of 22 exhibits. Officers of the association during the past year included A. J. Loughren, chairman, Thomas A. Edison, Inc.; J. B. Long, vice-chairman, Graybar Electric Company; and G. A. Nelson, secretary-treasurer, Waterbury Battery Company. The list of exhibitors with the products shown follows:

Bendix Radio Division, Bendix Aviation Corporation, Baltimore, Md. — VHF railroad radio telephone equipment.

J. H. Bunnell & Co., Brooklyn, N. Y.—Western Union FM telegraph equipment, telegraph transmission measuring equipment and other items of modern automatic telegraph equipment.

Communications Company, Coral Gables, Fla.—Two-way space radio telephone train communication equipment for yard and road service, and radio for automotive services.

Electronic Communications Equipment Company, Chicago.—Full-half duplex telegraph equipment, way-station amplifier, dispatcher's amplifier, yard intercommunicating amplifier, and yard communication system equipment, including 50 and 125-watt paging amplifiers, talk-back loud-speaker and control console.

Fansteel Metallurgical Corporation, North Chicago, Ill.—Voltage-regulated d.c. power supply and other communications power-supply equipment, utilizing selenium rectifiers.

Farnsworth Television & Radio Corporation, Fort Wayne, Ind.—VHF radiotelephone systems, passenger entertainment distribution systems and lightweight walkie-talkie radio.

Federal Telephone & Radio Corp., Clifton, N. J.—Mobile radio telephone units for use on road train and yard engines or highway automatic vehicles, and short-haul telephone carrier system.

General Railway Signal Company, Rochester, N. Y.—Radio communication equipment for yards and road trains.

Graybar and Western Electric Companies, New York.—Operation of voice-frequency and carrier railroad telegraph and differential duplex train dispatching telephone systems, program distribution systems for trains and talk-back systems.

Kellogg Switchboard & Supply Co., Chicago.—Carriers, repeaters, telephones and other allied telephone equipment.

Lenkurt Electric Company, San Carlos, Cal., and the Automatic Electric Sales Corporation, Chicago.—Railway communication supplies, special phones, etc., and carrier telephone systems of various types.

Motorola, Inc., Chicago. — Handie-talkie and other mobile radiotelephone equipment.

National Telephone Supply Company, Cleveland, Ohio.—Nicopress splicing sleeves, dead ends and Nicopress tools.

Railway Communications, Lincoln, Neb.—Carrier communication portable telephone set, electronics device for testing and adjusting watches.

Railway Electronics, Inc., Tuckahoe, N. Y.—Electronic duplex telegraph terminal, electronic single-line repeater and rectifier line battery supply.

Railway Radio-Telephone, Inc., Washington, D. C.—Walkie-talkie and an inductive train telephone system for communication between passengers on trains and their offices or homes in conjunction with the Bell System.

Reliable Electric Company, Chicago.—Protected and unprotected terminals, crossarm arrester, outdoor station protector, outdoor lighting arrester, indoor station protector, telegraph instrument protector, fuses, cable hangers, compression tool and splicing sleeves, bridging connectors, main distribution-frame protector banks, cable pulling grips, terminal blocks and drop wire clamps.

Stromberg-Carlson Company, Rochester, N. Y.—Magneto telephones, sound equipment for public address and yard communication, and Dillon sets for line testing, and Dillon dynamometer.

Teletype Corporation, Chicago, — Monopulse printer for "intercom" service and torn-tape message relaying systems.

Webster Electric Company, Racine, Wis.—Telespatch yard paging and intercommunication systems and equipment.

Western Railroad Supply Company, Chicago.—Lightning arresters and protectors; telephone and telegraph jacks, jack strips and boxes; terminal and connecting blocks; fuse and resistor mountings; unit switchboards, test and patch panels; keys, sounders and relays; dry-plate rectifiers and battery eliminators; mercury-vapor tube rectifiers; volt-ohm-milliammeter and other testing instruments; and transposition brackets.

Whitney Blake Company, New Haven, Conn.—Drop and distribution wire; underground signal and communications wire; locomotive cab signal, train control and headlight wire; and inside telephone, jumper and duct wire.

Heavy Duty Transfer Diesel

(*Continued from page 41*)

Diesel, being 7.8 cents compared with 22.2 cents. Gross ton-miles per train-hour totaled 37,573 compared with 18,099, and gross ton-miles per train-mile were 3,253 compared with 2,418. For the same 7-month period, average monthly statistics for the Diesel transfer locomotive were as follows:

Train-hours	365
Train-miles	4,209
Locomotive-miles	5,529
Gross ton-miles	13,692,575
Fuel cost	$1,074.21
Lubrication cost	$ 138.55
Locomotive repair cost	$1,319.31

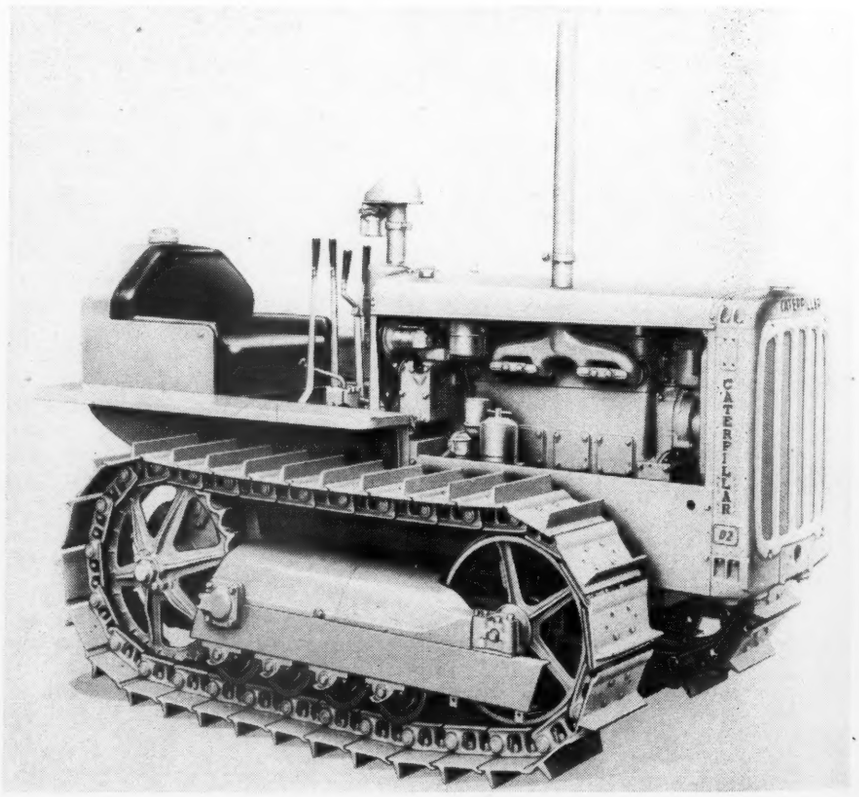
In August, 1947, the locomotive was available and in service 28 days, being loaned to the Indiana Harbor Belt for 2 days and in the shops for inspection and maintenance 1 day, and during its period of availability to the E. J. & E. ran 6,771 mi., or an average of 241.5 mi. per day, equal to a round trip from Gary to Waukegan in each 24-hr. period.

Tonnage ratings have been increased considerably, and doubled in one case, as compared with those set for the 2-8-2 type steam locomotives, as shown above.

	Eastbound			Westbound		
	2-8-2	No. 100	Ruling grade	2-8-2	No. 100	Ruling grade
Waukegan to Spaulding	1,800*	3,600	1.0 %	3,100	4,000	
Spaulding to E. Joliet	(a)	(a)		3,500	4,400	0.40%
E. Joliet to Frankfort	2,750	4,200	0.5 %	4,300	5,000	
Frankfort to Gary	(a)	(a)	0.37%	4,300	5,000	0.33%

* 2,600 with helper out of Waukegan yard.
(a) No fixed tonnage ratings.

Success of the Diesel transfer locomotive to date led the management of the Elgin, Joliet & Eastern to place orders for 25 locomotives of an almost identical design, as reported in *Railway Age* for October 4, page 72.



The new D2 Caterpillar crawler-type tractor

Developments by Caterpillar

The Caterpillar Tractor Company, Peoria, Ill., has announced the development of a new four-cylinder Diesel engine (Model D311), a new Diesel track type tractor (Model D2) and a new motor grader (Model 212). The new D311 Diesel engine, which is the focal point in the power increases which are found in the new tractor and motor grader, replaces the D3400 model in the company's line of industrial motors. It is said to develop a maximum output of 49 hp. at 1,700 r.p.m. In addition to being the power unit of the new tractor and motor grader, the new engine is available for industrial power, as an electric set and as a marine engine.

Refinements of the new engine, according to the manufacturer, are: A ¼-in. larger bore, resulting in an increase to 252 cu. in. in piston displacement; the application of stronger connecting rods and heavier, stronger crankshaft; chrome-plated top piston rings for longer life; divided manifolding to allow an independent port for

each valve, thus improving the flow of incoming air and exhaust gases; an improved oil-pressure control system assuring maintenance of proper oil pressure at the bearings even for extreme cold weather starting; and a new fuel injection valve design, with the pressure-operated valve mechanism enclosed in a copper capsule, easily replaceable as a unit, with no overflow lines required. In addition, the new engine is fitted with a larger and more efficient air cleaner, which is said to retain the advantages of an oil bath with a swirl-type precleaner; a new governor equipped with anti-friction bearings, to provide sensitive and accurate control; and a three-tube type oil cooler mounted beside and flush with the water radiator core, which is said to provide more effective cooling of the lubricating oil and water, to facilitate servicing, and to simplify the installation of blower fans.

The new D2 tractor is said to have 32 drawbar horsepower and 38 belt horsepower, an increase of 24 per cent over its predecessor. In addition to the improved engine, the use of new, harder metals and better heat treatment is said to have brought to the tractor an improved transmission, final drive and clutches.

The new No. 212 motor grader is rated at 45 hp., which is said to be a 29 per cent increase in power over the previous grader of this size and weight. Other advantages incorporated in the new grader are said to include power-operated mechanical controls equipped with anti-coasting brakes to prevent creeping or coasting under load; increased speed in all ranges of a four-speed transmission; and an arched front axle to provide maximum clearance.

New Southern Pacific Plant for Combustion Tests

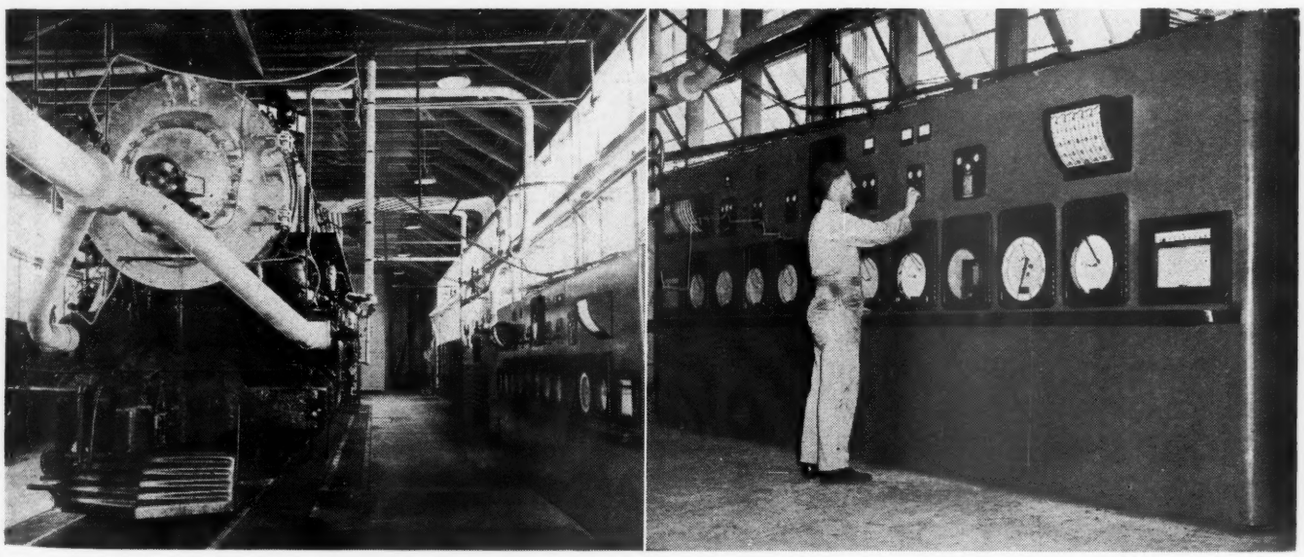
THE Southern Pacific has recently installed at its Sacramento, Cal., testing and research laboratory a new standing test plant for locomotives. This plant consists of a building 120 ft. long by 32 ft. wide, especially designed to house a full-scale locomotive undergoing test, together with a complete set of recording and indicating instruments for determining conditions existing in the locomotive. Numerous automatic controls are being used to insure accurate results.

Superheated steam, generated by the boiler, is de-energized to exhaust conditions by means of a special water-spray system in the locomotive cylinders and by the automatic by-pass arrangement of surplus steam created by de-superheating sprays. Automatic controls are used on fuel oil and feedwater as well as the de-superheating arrangement.

Recording instruments are employed wherever possible to obtain temperatures, pressures, rates of flow, as well as oxygen and carbon dioxide contents in exhaust gases. A special manifold arrangement is employed to meter steam to auxiliaries through an orifice arrangement.

A complicated system of probes is employed to obtain samples of firebox gases at predetermined locations within the firebox. Temperatures are measured at various locations in the firebox as well as on the fire and water sides of sheets.

These standing tests form one phase of a general research program on oil-burning steam locomotives, being conducted by the Southern Pacific with the assistance of Battelle Memorial Institute, Columbus, Ohio. The principal object of these tests is to study, as accurately as possible, the system of fuel combustion and drafting arrangements used on oil-burning steam locomotives and to improve designs wherever indicated to take advantage of any operating economies obtainable.



Left—S. P. 4-8-4 type oil-burning steam locomotive connected up for standing fuel tests. Right—The instrument panel is conveniently located adjacent to the locomotive

GENERAL NEWS

Kendall Cites Boost in Freight Car Output

A. A. R. Car Service Division head hopes Reed conference will speed production

The delivery of 7,597 new freight cars in September was the "first substantial approach" yet made in the 10,000-car program setup in March, Chairman Warren C. Kendall of the Car Service Division, Association of American Railroads, said in his latest monthly review of the "National Transportation Situation." At the same time, Mr. Kendall, commenting on an October 15 conference called by Senator Reed, Republican of Kansas, (reported in *Railway Age* of October 18, page 70) asserted that "it is hoped" that, through the recent organization of an enlarged "task committee" of car builders, specialty manufacturers and representatives of the railroad and steel industries, the allotment of the necessary steel products and component parts will be arranged so as to accomplish a "further and continued increase" in the production of new cars and "early attainment" of the 10,000-car program.

Mr. Kendall noted that, as of September 30, 116,546 cars were on order, of which 90,043 are scheduled to be built by the car builders and the remaining 26,503 in railroad shops. He found it "pleasing to report" that the railroad shops exceeded their 1,500-per-month quota in August, when they built 1,617 cars, and further exceeded it in September when 1,929 cars were built. The 116,546 cars on order as of September 30, according to Mr. Kendall, exceeded by 30,467 the number on order March 1, while the 7,182 cars installed during September, as compared with 6,514 retired, marks the "first net gain in freight car ownership that has occurred in 25 months."

New Records Made—The C. S. D. chairman also observed that the "historic fall peak" of railroad freight car loadings is again at hand and that "new records of railroad performance are being made." In this connection, he cited the week of October 11, when the loading of revenue freight totaled 956,862 cars, the highest since the last week of August, 1930. "While the total for week of October 11 was 27,648 cars, or 2.8 per cent, under the high week of 1930, the present aggregate of tonnage shipped is actually greater," he said, "and this record was accomplished with an ownership of 544,000 less freight cars than in 1930."

In his survey of individual car supply and prospects, Mr. Kendall related that all types of open top cars are in "very heavy" demand, adding that "1947 seems destined to establish a peacetime record in the loading of open top cars, and the heavy demands for this type of equipment will certainly continue throughout the winter months." He warned that "the job can only be satisfactorily met by the highest degree of cooperation between shippers, receivers and the railroads for the most intensive usage of cars."

Turning to the hopper car situation, Mr. Kendall said it is apparent that, in the absence of some further interference, revenue coal loadings in 1947 will "come close" to the record 1944 loadings, when approximately 620,000,000 tons of bituminous coal were produced. "This," he stated, "is a very satisfactory performance in view of the extremely heavy demands now being made on the open top car supply for protection of other commodities," adding that "with the present trend of coal production and demand, it is entirely possible that bituminous coal loadings this year may exceed the 1944 performance."

More Hoppers Loaded—During the 40 weeks ended October 4, according to the C.S.D. chairman, 10,367,907 hoppers were loaded with all types of commodities, an increase of 19.8 per cent over the comparable 1946 period, while 31,103,781 gross tons of coal were moved to ports for shipment abroad during the first nine months of 1947, an increase of 103 per cent above the same 1946 period. The October export program, he said, provides for approximately 4,000,000 tons, with a reduction to 3,500,000 tons being planned for November. The all-time coal export record was achieved in August when 5,038,470 gross tons were moved to shipside.

Mr. Kendall also reported that the gondola supply continues to be a "serious problem," with shortages being reported from all sections of the country, particularly by steel mills in Eastern-Allegheny territory, which, he said, have "considerable tonnage" piled up on the ground for the lack of cars. "Unprecedented requirements for building construction materials . . . are causing a heavy strain on the available car supply," Mr. Kendall said, "but this situation should show some easement in the near future, particularly in the northern sections, as construction programs are gradually suspended for the winter."

Present demands for flat cars, Mr. Kendall said, are "very heavy," the situation being "possibly more acute now than it has been at any time this year." At the same time, he stated, there has been little, if any, relaxation in requirements for covered hoppers, the upward trend in covered hopper loadings being due in part to the fact that railroad ownership of such equipment has increased over 30 per cent during the past 18 months.

(Continued on page 50)

Moore Succeeds Wyer as C. N. J. Executive

Arthur C. Tosh of the Reading becomes chief operating officer of the road

Earl T. Moore, chief operating officer of the Central of New Jersey, has been appointed chief executive officer, effective November 1, to succeed William Wyer, who has resigned, it was announced this week by Walter P. Gardner, trustee. Mr. Moore will be succeeded as chief operating officer by Arthur C. Tosh, who has resigned his position as assistant vice-president, operation and maintenance, of the Reading.

Commenting on the changes, Mr. Gardner said, "Mr. Wyer came to the Jersey Central on July 1, 1943, with a definite program in mind for the improvement of our situation, which included increases in commutation fares, changes and improvements in suburban service, increases in divisions enjoyed on New York harbor traffic, and separate operation of the lines in Pennsylvania. Mr. Wyer, who is the senior partner of Wm. Wyer & Co., consulting engineers of Newark, N. J., has for some time expressed a desire to resign his duties with the Jersey Central in order to devote his full time to the affairs of his partnership. Now that the principal objectives of his employment as chief executive officer of the Jersey Central have been largely accomplished, his resignation has been accepted." Mr. Gardner added that Mr. Wyer, through his firm, will continue professional work he has been doing for the trustee and that, being relieved of many administrative duties, he will be able to devote more of his time to certain new projects now being considered involving matters of importance to the Central of New Jersey.

Mr. Moore was born on October 14, 1897, and entered railroad service in June, 1913, when he joined the Reading as a clerk to the supervisor at Lansdale, Pa. He served, successively, as stenographer in the office of the superintendent of the New York division; clerk in the same office; extra yardmaster in the division; general yardmaster at Bethlehem, Pa.; assistant trainmaster at Bridgeport, Pa.; supervisor of terminals; freight trainmaster of the Reading division; and trainmaster of the same division. On May 1, 1939, he joined the C. of N. J. as assistant superintendent with headquarters at Jersey City, N. J. He held that position until June 29, 1941, when he was promoted to superintendent of freight terminal operations. On September 1, 1943, he was made assistant general manager and a year later he was named general manager.

Mr. Moore's title was changed to chief operating officer on September 15 last.

Born at Oneida, Pa., on July 10, 1891, Mr. Tosh began his railroad career on September 27, 1909, with the Reading, serving until June, 1910, as night clerk and operator at Catasauqua, Pa. Subsequently, he served, successively, as day operator at Catasauqua; telegraph operator in the office of the chief train dispatcher at Reading; extra agent at East Penn Junction, Pa.; agent pro tem, agent and dispatcher, all at Catasauqua; inspector in the office of the general manager; inspector of transportation; superintendent, highway transportation; superintendent of the Reading Transportation Company, a Reading subsidiary,

Earl T. Moore

and, simultaneously from March, 1930, until March, 1934, superintendent, passenger transportation, of the railroad; superintendent of the Shamokin division; superintendent, transportation of both the Reading and the C. of N. J.; and general superintendent of the Reading. In July, 1943, Mr. Tosh was appointed general manager of the Reading and on September 1, 1945, assistant vice-president, operation and maintenance.

Faricy on Radio Says Railroads Must Spend Vast Sum

Improvement in plant and equipment which will increase the capacity of the railroads, helping to alleviate car shortages, must be made with the investment of a great deal of money, William T. Faricy, president, Association of American Railroads, stated in a talk over radio station KSD at St. Louis, Mo., on October 28, coincident with his appearance at the 11th annual meeting of the National Association of Shippers Advisory Boards in that city.

"Over the past 25 years," the A. A. R. president said, "the railroads have spent more than $13 billion on improvements—or they could not be handling the record traffic moving today. For every dollar the railroads have paid out in dividends in those years, they have spent more than two dollars for improvements looking to better and more economical service to the public. There are many other improvements and enlargements yet to be made," Mr. Faricy continued, "such as the orders the railroads have placed for additional freight and passenger cars." Mr. Faricy described the collection of sufficient transportation charges to cover the railroads' operating costs, as well as the investment cost of creating and maintaining their plant in good order, as the key to the railroads' future role of supplying the nation's transportation needs as a private enterprise.

P. R. R. and Central of Brazil Order SKF Journal Boxes

SKF Industries, Inc., has announced the receipt of an order from the Pennsylvania for 400 standard saddle-type roller-bearing journal box units for installation on 50 passenger cars which the railroad will rehabilitate in its Altoona, Pa., shops. An order for 688 spherical roller bearing units to equip 86 cars has been received from the Central of Brazil. It also was announced that a grease-lubricated multi-row cylindrical roller bearing journal box recently developed by SKF for use in old-style narrow pedestal trucks will be placed in test service on the Pennsylvania. This new unit is already in demonstration service on the Union Pacific and the Atchison, Topeka & Santa Fe.

Railroad Heads on Nationwide Safety Committee

A coast-to-coast committee of 28 national leaders of business, industry, labor, finance and public affairs has been formed to lead a "continuous public attack" on the fourth greatest cause of death, the outstanding single cause of physical disabilities, and one of the largest preventable economic drains in the United States, according to William A. Irvin of New York, former president of the United States Steel Corporation and chairman of the board of trustees of the National Safety Council.

Headed by Mr. Irvin, the committee has been organized to sponsor a country-wide "Green Cross for Safety" movement to be carried on by the council in cooperation with community safety organizations as a public service. The purpose of the movement is to promote the practice of safety more widely in general daily life, Mr. Irvin said. It will be directed especially against home, school, farm and other accidents that have not been adequately reached by organized preventive efforts.

"The need for such a movement is evident from the fact that accidents killed 99,000 Americans last year, seriously injured 10,400,000 more, and cost the country $6,400,000,000 in cash damages," Mr. Irvin declared. "And more than half of this toll was accidents outside the area presently covered by organized safety work."

A third of the persons killed by accidents died of injuries received while they thought they were safe in their homes. This was exactly twice the number killed in industrial accidents. Motor vehicle accidents caused 33,700 deaths. Seventeen thousand were killed in public places not connected with traffic, statistics compiled for 1946 from all available public and private sources by the National Safety Council show.

Among the national committee members are: Winthrop W. Aldrich, chairman, the Chase National Bank of New York; Benjamin F. Fairless, president of the United States Steel Corporation; Francis J. Gavin, president of the Great Northern; Walter S. Gifford, president of the American Telephone & Telegraph Co.; William Green, president of the American Federation of Labor; E. Roland Harriman, partner in Brown Bros., Harriman & Co., New York; William M. Jeffers, vice-chairman of the Union Pacific; and Philip Murray, president of the Congress of Industrial Organizations.

Toledo Has "Railroad Day" to Begin Work on New Station

Construction of a new union station at Toledo, Ohio, got under way on October 2 at a "Railroad Day" celebration attended by many high-ranking railroad officers and the city's civic leaders. The beginning of actual work on the terminal was symbolized in the afternoon when several spikes were pulled from a section of old track by Gustav Metzman, president of the New York Central, Toledo's Mayor Lloyd Roulet and Charles E. Swartzbaugh, chairman

Launching the construction of a new union station at Toledo, Ohio, on October 2, were: (nearest camera) Gustav Metzman president of the New York Central; (center) Mayor Lloyd Roulet, of Toledo, and Charles E. Swartzbaugh, chairman of Toledo's Chamber of Commerce Union Station Committee

of the city's Chamber of Commerce Union Station Committee.

The new building will be constructed of brick with limestone trimming, and have "as much glass as it is possible to use since Toledo is a glass town," it was stated. The station is scheduled to be

completed within two to three years, depending on the availability of materials.

As a climax of "Railroad Day," a banquet was given in the Commodore Perry hotel, during which Mr. Metzman delivered the principal address before some 500 persons, including seven railroad presidents. His subject was "A Partnership with Toledo." R. E. Dougherty, vice-president, assistant to president of the N. Y. C., told briefly of the new and modern conveniences that the new station will offer travelers. Other speakers were Paul M. Herbert, lieutenant governor of Ohio, and Mayor Roulet.

Negro Firemen Sue Union and Southern Railroads

Twenty-one negro firemen have filed suit in the United States District Court for the District of Columbia, charging that they have suffered discrimination at the hands of the Brotherhood of Locomotive Firemen and Enginemen and three southern railroads. The suit names as defendants the Southern, Atlantic Coast Line, and Seaboard Air Line, but it seeks relief also for negro firemen employed by subsidiaries of those roads.

The suit, which seeks damages along with temporary and permanent injunctions against the alleged discrimination, assails what the complaint identifies as a 1941 agreement between the brotherhood and the railroads. Under that agreement, it is alleged, the so-called "non-promotable" (negro) firemen employed by the defendant roads have been deprived of preferred firemen positions to which their seniority on the firemen's rosters would otherwise entitle them.

Similar suits brought by individual negro firemen in the past have been decided in their favor by the courts, including upholdings by the United States Supreme Court (see *Railway Age* of December 23, 1944, page 970).

Missouri Pacific Installs Radio for Passenger Entertainment

To provide entertainment and to engender a more friendly atmosphere among passengers, the Missouri Pacific is installing complete, specially-designed radio receiving sets in 16 coaches, parlor cars and diners in the consist of its "Missouri River Eagle" trains, operating between St. Louis, Mo., and Kansas City, and "Colorado Eagle" trains, operating between St. Louis and Denver, Colo., as well as in 27 similar types of cars in service on other trains.

Radio programs are fed into two or three loud-speakers in the car, which are so placed as to achieve even sound distribution throughout the car. Volume and control over the station selection is exercised by the car attendant or dining car steward. A development of the Radio Corporation of America, the sets have been especially engineered for railroad use, and are said virtually to eliminate the heretofore undesirable hum and static interference of the older installations. A new type aerial has been designed and what is termed a better method of grounding the sets to the truck frames is now being used, both aiding materially in providing better reception of broadcast programs.

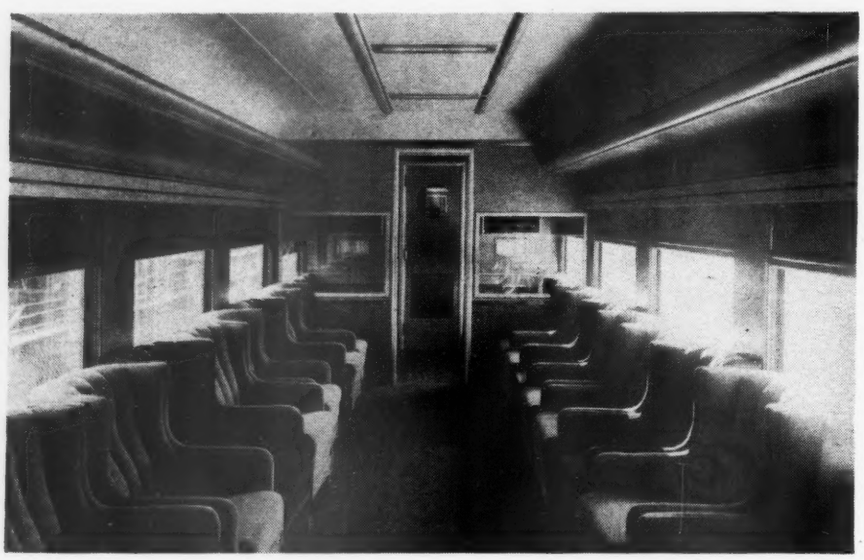
Three cars have already been equipped and placed in service, and others are being sent to the company's shops at Sedalia, Mo., and Little Rock, Ark., as quickly as they can be spared from service for the five days needed to install the equipment. It is expected that all of the cars will be equipped by December 15. Work is being done by the railroad's own shop forces under the supervision of L. J. Verbarg, air conditioning engineer.

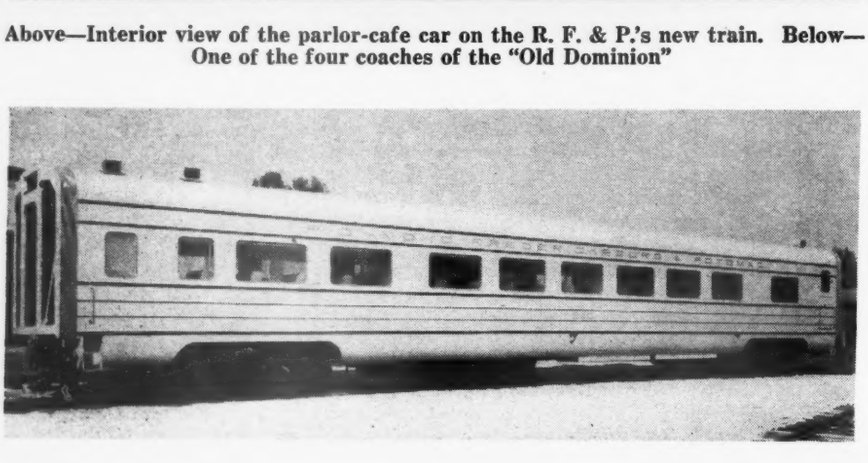
R. F. & P. Gets New Train for Richmond-Washington Run

Delivery of the "Old Dominion" to the Richmond, Fredericksburg & Potomac was made by the American Car & Foundry Co. on October 28. This new, lightweight, streamlined, air-conditioned train, consisting of four coaches and one parlor-cafe car, is scheduled to operate in fast service between Richmond, Va., and Washington, D. C.

The cars are built of high-strength steel and the exteriors are painted gray with blue and gold horizontal stripes. The coaches have ivory-painted ceilings and aluminum and tan walls. Coach seats are upholstered in blue, the windows are provided with green gold window shades and the floors are covered with asphalt tile of blue and agate. Each of the coaches is divided by a glass partition into smoking and non-smoking compartments.

A parlor section, a lounge and a dining room seating 20 are provided in the parlor-cafe car. The decorative scheme includes an ivory ceiling, tan walls and rose wainscoting. Chairs in the parlor section are upholstered alternately in gray, cardinal red and blue-green. The lounge chairs are upholstered in red and those in the dining room are gray needlepoint. Blue curtains and green carpets are used throughout the car.





Above—Interior view of the parlor-cafe car on the R. F. & P.'s new train. Below—One of the four coaches of the "Old Dominion"

Northern Perishable Terminals Visited by S. A. L. Men

Marketing of Florida fruits and vegetables, particularly with relation to railroad transportation, will be studied in November by representatives of the Seaboard Air Line, who will follow the route of movement to terminal markets in Baltimore, Md., Philadelphia, Pa., and New York. Seaboard representatives from the fruit and vegetable shipping sections of Florida will gather first hand knowledge of the methods of handling perishables to and in the metropolitan terminal markets.

Two separate groups will go on educational tours, it has been announced by John P. Derham, Jr., freight traffic manager of the Seaboard. "One result we expect to achieve," he said, "is simple but important—our perishable freight representatives will be better able to discuss service and related matters with shippers." The Florida representatives will go in groups

Train of new freight cars, part of an order for 5,000 box cars, has been rushed into service by the New York Central to help relieve the current car shortage for grain shipment

rather than individually in order that more opportunity for questions, discussions and clarification of procedures may be effected.

The first group of eight men will leave Florida November 2, go to Potomac Yard near Washington, D. C., to observe movement of cars bearing perishable freight through this important gateway, thence to terminal markets in Baltimore, Philadelphia and New York to observe the placement and unloading of cars and the operation of citrus auction and produce markets. The tour will conclude with a visit to Harsimus Cove, Jersey City, N. J., to observe the loading of cars on car floats to be lightered to New York.

The first group will return to Florida on November 8 and the second will leave Florida on November 16, follow the same course and return on November 22.

Portrait Honors P. J. Watson

A portrait of Philip Jay Watson, Jr., former president of the Terminal Railroad Association of St. Louis, who died on November 1, 1946, was unveiled at a ceremony in the grand hall of the Union Station, St. Louis, Mo., on October 13.

The portrait, which was a gift of Mr. and Mrs. W. C. Shank of Kansas City, Mo., was presented to the Terminal Association by J. A. McClain, Jr., general counsel of the Wabash, and was accepted by Armstrong Chinn, president.

"Friendship Train" to Collect Food for Europe

A freight train which will collect food from American citizens for distribution in Europe and will dramatize this country's contribution to European relief will be run from coast to coast early next month, according to an announcement from William T. Faricy, president of the Association of American Railroads.

Starting from Los Angeles, Cal., on November 7, the train, to be known as the "Friendship Train," will reach New York on November 18 after making stops to pick up carloads of food at more than 40 cities such as Sacramento, Cal., Reno, Nev., Cheyenne, Wyo., Omaha, Neb., Chicago, Pittsburgh, Pa., Cleveland, Ohio, Philadelphia, Pa., and Buffalo, N. Y. It will be operated by the Southern Pacific, Union Pacific, Chicago & North Western, Pennsylvania and New York Central as a public service at the request of the United States Department of Agriculture.

The train is expected to start out with five carloads of food donated by the people of Los Angeles, and have about 80 cars when it arrives in Chicago. At Chicago, it will be split into two sections, one going to New York over the P. R. R. and the other over the Central. Each section will pick up additional cars on the way.

Aboard the "Friendship Train" as it makes its transcontinental trip will be representatives of the French, Italian and American governments, motion picture and radio stars, and newsreel, press and radio people. Governors, mayors and members of citizens committees will ride the train in their localities. A short ceremony will be held at each stop. The enterprise is being directed by a subcommittee of the Citizens Food Committee.

The Chicago, Indianapolis & Louisville expressed its desire to cooperate with the "Friendship Train" in a telegram sent to Mr. Luckman on October 27. It stated, in part: "We would like to start a car or cars from Louisville and from Indianapolis to meet this train at Chicago. This would allow the people from the Hoosier state to give their donations of food. Will you please advise how we should go about it?"

Katy Takes Steps to Relieve Gondola Shortage

R. J. Morfa, chairman of the Missouri-Kansas-Texas, announced in Houston, Texas, on October 21 that, in an attempt to remedy the shortage of gondola cars "a car building program has been set up in the Katy car shops in Denison, Tex., and we expect deliveries will begin about the first of the year." The cars will come off the line at a rate of about four a day, Mr. Morfa added.

Donald V. Fraser, Katy president, also announced at the same time that the road is shopping 100 flat cars, putting board sidings on them and re-equipping them as gondolas to help relieve the shortage. "Deliveries on this stop-gap program," Mr. Fraser said, "will begin in about ten days."

Railroads' Concession Ends Canadian Strike Threat

Threat of a nationwide strike by 125,000 Canadian railway employees was removed when the carriers and the unions reached agreement on October 25 on the question of paid vacations. A brief statement issued jointly on behalf of the major roads and the brotherhoods disclosed that recommendations made by a conciliation board last June, rejected then by the companies but accepted by the unions, were the basis for the agreement.

The statement said:

"The question of increased vacations with pay for railway employees has been settled on the basis outlined by the report of the board of conciliation. Details of the application to the various classes of employees will be a matter of negotiations between the respective organizations and the railways."

It was signed by P. H. Hall, chairman of the negotiating committee for 17 unions, and by William Manson, vice-president of the Canadian Pacific, and N. B. Walton, executive vice-president of Canadian National.

The announcement followed a three-hour meeting in the C. N. R. board room, the third conference between the parties since the union announced that November 3 had been set as a strike date unless agreement was reached.

Advised in Ottawa of the settlement, Labor Minister Mitchell said: "I never really expected there would be a strike on our railways. For years I have been intimately acquainted with the leaders of the railway organizations and the officers of the companies, and I never lost hope that an amicable settlement of the differences would be reached."

Under the agreement, employees with one year's service will receive six paid holidays a year; employees with three years' will receive nine days, and employees with five years' will receive 12. The railways had contended such a scheme would cost them $5,000,000 a year and, while approving the plan in principle, had rejected it because of the cost.

The old holiday arrangement granted paid vacations to many classes of employees, ranging from five days to 18 days, depending upon seniority. The new arrangements standardizes these vacations, and will apply to all brotherhoods, but employees already receiving vacations with pay will not be adversely affected. Men now getting 18 paid holidays will continue to receive them.

P. R. R. "Recreation Cars" Ready by Year-End

The Pennsylvania has announced that three "recreation cars" now being constructed by the American Car & Foundry Co. will go into service initially on the "Jeffersonian," overnight coach train between New York and St. Louis, Mo., at the turn of the year. Each of the cars will have a newsreel theater, a game and reading room, a children's nursery and a buffet-lounge. Raymond Loewy Associates suggested the general layout of the car and are handling the decorative features.

Newsreels will be shown continuously in the glass-partitioned theater at one end of each of the air-conditioned cars. The theater will be equipped with a sofa and lounge chairs. In the middle of the car will be the buffet-lounge section with a carpeted floor several inches below the level of the rest of the car. A low partition, topped by safety glass, will separate this lower-level room from the side passageway from which passengers will enter. Along one wall will be tables for four, two passengers sitting on built-in seats upholstered in blue leather, and the others opposite them on matching chairs. Along the other side will be tables for two, with chairs upholstered in green.

The next room in the car, separated from the buffet-lounge by a compartment for radio, sound reproducing and public address equipment, and by a transparent plastic door, will be the nursery, which, with a linoleum floor and an illuminated, star-studded ceiling, will be styled especially for children. Adjacent to it will be a special children's lavatory. Drawing on its experience in furnishing nurseries in large terminals, the announcement said, the Pennsylvania will equip this room with a table and four chairs, a play pen, a miniature sofa, a blackboard and toys.

At the end of the car will be the game and reading lounge, providing tables for checkers, chess, backgammon and card games, as well as settees for reading and a writing desk and chair. This room will have deep carpeting, green upholstery and light pastel wall finishes with murals. There will be soft, background recorded music.

Kendall Cites Boost in Freight Car Output

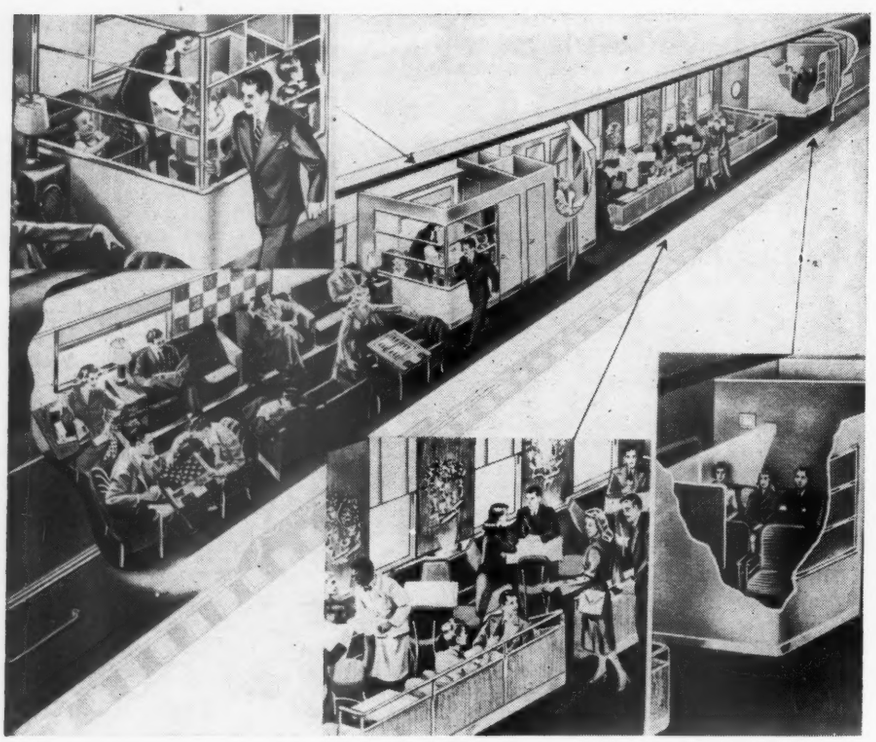
(*Continued from page 46*)

Demands for all classes of box cars also have shown a substantial increase during the present season of peak car loadings, Mr. Kendall continued, adding that "the available supply, although it is being allocated as equitably as possible between all areas, is not sufficient to meet daily the full requirements of commerce." He said that "although the high level of loadings constitutes a tribute to both good railroad service and expeditious handling of cars by the shippers and receivers, a better job is possible through increased efforts to secure the maximum practicable utilization of the limited box car supply to the end that the full benefits of car conservation may be obtained."

Deliveries Slow—With respect to other types of equipment, Mr. Kendall reported that there has been no decrease in the demand for both single and double deck stock cars and that the supply of automobile cars has been adequate to meet requirements, with surplus auto cars being used to relieve the box car shortage. He also observed that refrigerator car loadings have exceeded the 1946 loadings since the last half of August, adding that although 2,882 new reefers were delivered during the first eight months of 1947, delivery of approximately 5,100 additional reefers on order is slow due to the shortage of certain materials and small fixtures necessary to compete the cars.

Mr. Kendall's review also disclosed that the average turn-around time of freight cars for September totaled 12.99 days, as compared with 12.82 days in August and 14.21 days in July; and that the average percentage of detention of cars over the free time during September was 16.41, as compared with 17.01 in September, 1946.

Mr. Kendall also referred to Interstate Commerce Commission Service Order No. 778, which, as he described it, will provide "railroad operating regulations for car movement." (See *Railway Age* of October 18, page 80.) "There is no conflict between the provisions of this order and the requirements of the Car Service Rules published by the A. A. R.," he said. "While the latter rules provide for the disposition of empty cars, they do not deal with the time element or require movement within a certain time."



Artist's sketch of the arrangement of the new P. R. R. recreation cars

Investigators Deplore Use of Wooden Cars in Canada

Canada's Board of Transport Commissioners reported vigorously against the continued use of wooden passenger cars and also against what was termed the persistent violation of plain operating rules in its findings from the investigation into the head-on collision at Dugald, Man., on the Canadian National on the night of September 1. The accident involved a special including wooden cars, bringing people back to Winnipeg from a tourist resort on Lake Winnipeg, and a transcontinental passenger train, and resulted in the death of 31 persons and injuries to 85 others.

The report of the board, which is headed by Col. J. A. Cross, had this to say:

"While the evidence in the present case indicates that reasonable progress has been made by the Canadian National in replacing wooden equipment with units of steel construction, the board feels that the Canadian National, as well as other railways under the jurisdiction of the board, should be impressed with the necessity of replacing wooden passenger coaches by steel ones as speedily as possible. . . .

"About an hour before the accident another train, under similar circumstances, also violated the rule requiring it to take the siding at Dugald. The board con-

siders it necessary to point out that it is the duty of the railway operating officials to require strict observance of the operating rules at all times.

"As to the cause of the accident, the board's finding is that the accident was due to the violation of the operating rules of the Canadian National by the crew of Passenger Extra 6001 West and to the failure of the operating official who was on the train to detect such violation of the rules in time to prevent the accident.

"In connection with marshalling of passenger equipment, an order will issue requiring all railways to marshal passenger trains in such a manner that no wooden coaches carrying passengers will be placed between cars of steel construction and that all wooden coaches will be placed on the rear of the train.

"The substitution of electric lighting for gas illumination in coaches which are adaptable for such conversion should be proceeded with by the railways as speedily as conditions permit. The board will take action from time to time to see that this direction is complied with."

Vaughan Analyzes Canadian Roads' Perplexities

The problem of the Canadian railways is one of mounting costs, falling net revenue, and the task of providing facilities to meet maximum demands from industry and agriculture, said R. C. Vaughan, chairman and president of the Canadian National, in an address October 28 before the Brantford, Ont., Board of Trade.

Freight rates in the United States are considerably higher than Canadian rates, stated Mr. Vaughan. The American railroads have been granted substantial increases in rates within the past year, and they have another application now before the Interstate Commerce Commission for additional increases. Canada, he said, has had no increase in freight rates for a quarter century and the cost of rail transportation remained at less than one cent for moving one ton of freight one mile. This, he believed, was the lowest per ton-mile freight rate in the world.

"It has been demonstrated that Canada cannot possibly do without railways," declared Mr. Vaughan. "I submit, then, that it is obvious that they must be given sufficient remuneration to enable them to keep their lines and rolling stock in good physical condition and to provide for improved facilities to meet the needs of the people."

Freight Car Loadings

Revenue carloadings for the week ended October 25 totaled 954,627 cars, the Association of American Railroads announced on October 30. This was an increase of 378 cars above the previous week, an increase of 12,370 cars, or 1.3 per cent, above the corresponding week last year and an increase of 99,848 cars, or 11.7 per cent, above the comparable 1945 week.

Loadings of revenue freight for the week ended October 18 totaled 954,249 cars, and the summary for that week as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, October 18

District	1947	1946	1945
Eastern	167,162	170,148	135,705
Allegheny	197,479	192,797	147,518
Pocahontas	75,710	71,318	26,176
Southern	139,722	140,328	118,644
Northwestern	149,780	147,712	137,776
Central Western	152,238	146,513	143,740
Southwestern	72,158	62,950	64,248
Total Western Districts	374,176	357,175	345,764
Total All Roads	954,249	931,766	773,807
Commodities:			
Grain and grain products	55,826	50,237	59,732
Livestock	22,665	33,518	27,199
Coal	191,711	191,019	96,970
Coke	14,884	14,690	6,999
Forest products	45,611	48,503	37,019
Ore	68,430	62,839	62,327
Merchandise l.c.l.	122,413	129,984	114,416
Miscellaneous	432,709	400,976	369,145
October 18	954,249	931,766	773,807
October 11	956,862	899,443	754,559
October 4	942,533	907,168	768,040
September 27	937,954	916,515	832,509
September 20	931,072	899,052	837,293
Cumulative total, 42 weeks	35,960,234	33,156,749	34,310,505

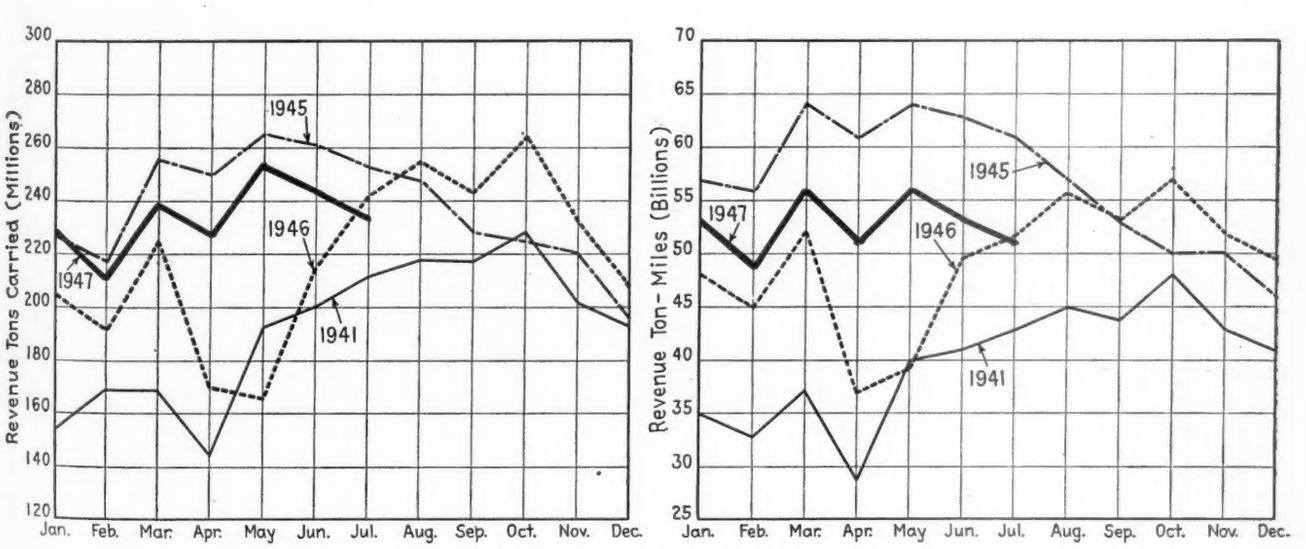
In Canada.—Carloadings for the week ended October 18 totaled 78,317 cars as compared with 88,131 cars for the previous week and 76,344 cars for the corresponding week last year, according to the compilation of the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
October 18, 1947	78,317	37,968
October 19, 1946	76,344	34,966
Cumulative totals for Canada:		
October 18, 1947	3,135,701	1,537,677
October 19, 1946	2,915,948	1,435,880

Efficient Transportation as a Key to National Security

The need for maintaining a sound transportation system is as essential to our foreign trade as it is to our domestic commerce, Gustav Metzman, president of the New York Central, said at the National Foreign Trade Convention held in St. Louis on October 20. As one of the basic needs of mankind, transportation has done more than any other single factor to unite America and to make this world a neighborhood of nations, he said.

"While I am especially interested in rail transportation," Mr. Metzman went on, "I would be derelict if I failed to consider the relationship of railroads to the nation's broad transportation problem and its effect upon our national and international responsibilities. This problem, therefore, must be approached from the standjoint not only of what is good merely for one particular form of transport, but also what is good for attaining a well-integrated system capable of furnishing efficient service to meet the needs of a growing nation and a troubled world. In the last 25 years transportation has had spectacular growth. Trucks and buses and the private automobiles have expanded their usefulness tremendously. Inland waterways have been considerably improved; pipe lines have been extended long distances and the airplane is now a common carrier of freight and express as well as passengers and mail."



Revenue Tons and Revenue Ton-Miles—1947 compared with 1941, 1945 and 1946

In the interest of national welfare and defense, he continued, no less than in the discharge of international responsibilities, the development of a sound transportation system demands that proper recognition be given to all agencies so as to permit them to be self-supporting and competitive with each other on equal terms. Only in such a way can this nation be assured of a fully-coordinated system capable of rendering the most efficient service possible at the lowest cost to meet the peacetime needs and the wartime demands of the nation. Transportation cannot survive half slave and half free.

"Our effectiveness in restoring world stability and a prosperous world trade," Mr. Metzman concluded, "can be no greater than our effectiveness in preserving the integrity and the efficiency of our entire transportation system with each agency considered in relation to its needs and its usefulness."

Canadian "Competitive" Rate Increase Held Up

The Canadian Board of Transport Commissioners has ordered the Canadian railways to suspend until further notice a proposed increase in so-called competitive freight rates amounting to 30 per cent.

As reported in *Railway Age* of September 27, page 62, the new tariffs, scheduled to start November 1, were not connected with the general hearing which has been before the board since last February on a railway application for increased freight rates generally by 30 per cent.

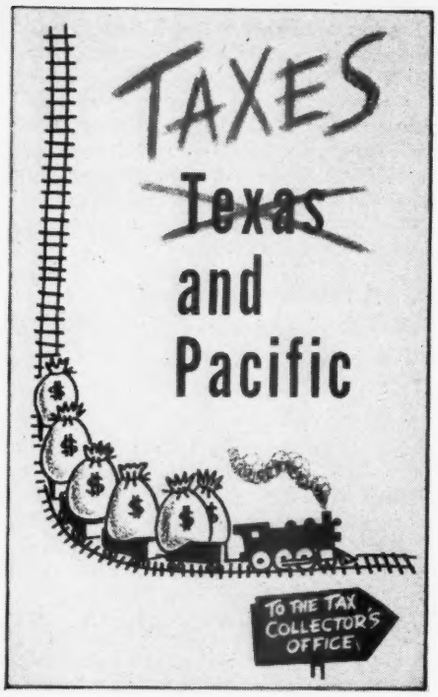
The competitive rate increase already permitted under present railway regulations became possible when price controls were lifted last month. Legal counsel for seven of the nine provinces, already opposing the application for the general increase, had opposed the sudden increase in competitive rates as throwing the whole hearing out of kilter.

With these competitive rates suspended until a further order by the board, the general hearing now will be resumed.

Where T. & P. Taxes Go in Texas

A little booklet, the title of which will be found in the picture above, is being distributed currently by the Texas & Pacific among citizens of towns along its lines in Texas and Louisiana. A frontispiece by W. G. Vollmer, the road's president, describes how the T. & P. and its subsidiaries not only render passenger and freight service to towns along its line but, through payment of city, county, state and federal taxes, help communities to build and maintain such facilities as schools, highways, parks, police and fire protection and many other essential public services.

The booklet continues cartoon-fashion with a breakdown of T. & P. taxes, noting a few less obvious uses to which imposts on the railway in the year 1946 were applied. Support of Confederate Civil War Veterans was included in its services; a sizable amount went into the fund whence comes the salary of the governor, the mayor, the sheriff and the dogcatcher;



and a goodly portion to such diversified services as county jury funds, improvements to courthouses and jails, maintenance of levees and drainage systems, etc.

A tabulation of the various type of taxes, plus the amounts of each paid in 1946, to which the railroad is subject completes the study.

Rate Refund on Cattle Shipped from Western Canada

Farmers in western Canada will be refunded 50 per cent of their freight charges on carload shipments of cattle to eastern Canada during the rest of 1947, the Canadian Agriculture Department announced at Ottawa.

The move was taken to relieve congestion resulting from the slowing-down of cattle marketings during a packing house strike and to assist in the movement of feeder cattle from prairie areas in which there is insufficient winter feed.

Shipments, limited to steers born after Jan. 1, 1944, and heifers born after Jan. 1, 1945, may be billed from any point in the provinces of British Columbia, Alberta or Saskatchewan to any point east of Manitoba.

The freight refund will be payable when the applicant is in a position to certify that the cattle have been retained in his ownership for at least three months from the date of shipment. To facilitate prompt payment of the refund, the statement said, it is important that a shipment be consigned to the prospective applicant.

B. & O. to Install Radios on N. Y. Harbor Tugs

The Baltimore & Ohio has announced plans to expand its utilization of radio communications by installing two-way very high frequency radio-telephone equipment on its fleet of seven tugs operating in the New York harbor area. The railroad has employed a similar type of radio equipment in the direction of its marine operations in Baltimore, Md., harbor, and its yard operations at New Castle, Pa. Equipment for the new installation in New York harbor, to be completed by spring, is being made by the General Railway Signal Company, of Rochester, N. Y. The radio will be of the frequency modulated type. The B. & O. tug fleet in New York harbor operates in conjunction with the tugboats of the Central of New Jersey, and the boats of the latter will be equipped with radio at the same time, along with a land station for the tug dispatcher at the Jersey Central pier in the North River. With the radio, tug captains will be able to reach the dispatcher or may be contacted by the dispatcher at any time. Similarly, any tugboat captain may talk to any other tugboat captain, since all the radio-telephones will operate on the same frequency.

* * *

Engines for Djibouti

Officials of the French Railway Mission inspect 6 MacArthur 2-8-2 type locomotives being built by Davenport Locomotive Works, division of Davenport Besler Corporation, for service in French Ethiopia. Left to right in the picture are Walter Chadwick, president of Davenport; Col. J. W. Marsh, retired, U. S. Army, purchasng consultant for the French; G. Marcillet, engineer with the French Railway Mission; Georges Bohl, chief of the mission; Wm. T. McHugh, chief inspector for the Pittsburgh Testing Laboratory; and George W. Koch, vice-president of Davenport Locomotive Works.

With the Government Agencies

Would Lift Ban on Rail-Owned Air Lines

Fletcher, Glacy, and other railroad officers appear before Air Policy Commission

Removal of restrictions imposed by the Civil Aeronautics Board against entry into the air-transport field of railroads and other surface carriers, and consolidation of all federal transport regulation under the jurisdiction of a single agency, were among recommendations embodied in presentations made by railroad officers appearing this week at Washington, D. C., hearings before the Air Policy Commission, which was set up by President Truman to investigate all aspects of civilian and military aviation and recommend an integrated air policy.

The railroads' viewpoints were outlined by R. V. Fletcher, former vice-president, research, and president, and now special counsel, of the Association of American Railroads; G. F. Glacy, comptroller, Boston & Maine, and assistant to the vice-president of the Maine Central; R. B. James, commerce counsel, Chicago, Burlington & Quincy; and P. A. Webb, Jr., general traffic agent, Illinois Central. As reported in *Railway Age* of October 25, page 58, F. G. Gurley, president of the Atchison, Topeka & Santa Fe, has also appeared before the commission.

Seeking Parity—Asserting that there is no sound reason for denying the railroads the privilege of engaging in air operations and that it is both unfair and contrary to the American system of free competitive enterprise to reject arbitrarily all railroad bids to enter the air field on the basis that they are large surface carriers, Judge Fletcher said that while the railroads are not advocating the "unrestricted right to enter the air as carriers of passengers and goods," they nevertheless favor the enactment of legislation which would place them on an "absolute parity" with other persons in the matter of securing certificates to operate.

"It should be made clear, by an amendment to the Civil Aeronautics statute, if necessary, that when a railroad applies for approval of a proposed operation, whether it be for establishing a new line or acquiring control of an existing line; whether the operation was to be directly by the railroad or through a controlled subsidiary or affiliate, the sole inquiry should be whether the applicant is fit, willing and able to perform the proposed transportation properly, to conform to the provisions of the . . . rules, regulations and requirements of the appropriate authority, and that such transportation is required by the public convenience and necessity," he said. "Such a provision in the law would go far to remove the confusion that now exists, and particularly would control a type of competition which is largely responsible for the present demand for subsidies."

Judge Fletcher's presentation was similar in part to the findings of the Subsommittee on Air Transport of the Railroad Committee for the Study of Transportation, as reported in *Railway Age* of October 4, page 53. That subcommittee, part of the group which carried out a five-year research program under the general chairmanship of Judge Fletcher, concluded, among other things, that the subsidy provided for air transport by the federal government alone is already "far in excess of any that has ever been made to any other public utility or industry."

Air Lines' Subsidies—Judge Fletcher said that while the railroads are "making no war upon air line operation and development," they are protesting continuation of a policy of "wholesale subsidization" of the air carriers out of funds "to which the railroads themselves are large contributors." He added that although air line government subsidies amount to "much more than $100,000,000 a year," many of the air lines are "hard driven to make ends meet."

As an example of government expenditures, Judge Fletcher observed that over $7,000,000 of public funds will be spent in 1947 and that $10,000,000 has been appropriated for 1948 for air safety regulations and practices, as compared with $1,347,000 spent this year by the Interstate Commerce Commission in regulating safety on the railroads. "And yet," he continued, "in the last six months of 1946. . .the railroads had about eight times as many passenger-miles as the air lines. In other words, for every dollar which the government expends for the safety of a rail passenger, it spends about $42 for the safety of an air passenger."

The witness also told the A. P. C. that "each form of transportation must stand on its own feet, with no help from the public purse," in order to "bring about fairness in the competitive struggle." "If a particular form of transport cannot survive without government subsidies," he went on, "there is obviously something wrong with its management or its endeavors. The air industry is more than 20 years old. It has attained the stature of a giant. Its days of being pampered and coddled should be terminated. If it cannot now stand alone it probably never will. It should be made to pay its own way by meeting its own operating expenses, maintaining its air ways, paying proper rentals for government constructed air fields and facilities, and carrying on its own research and safety producing projects just as do the railroads and the pipe lines."

(*Continued on page 55*)

Would Hike Allowance for N. Y. Pier Service

Increase recommended in I. C. C. examiners' report on C. N. J. complaint

Increased allowances out of line-haul rates for car-floatage and lighterage performed by railroads serving New York have been recommended in a proposed report which the Interstate Commerce Commission has received from Examiners A. R. Mackley and J. P. McGrath. The report is in No. 29162 where the Central of New Jersey is the lone complainant, seeking increased allowances which are opposed by other roads serving New York harbor.

Although there are exceptions, the present allowance on most traffic, whether floated or lightered, is 4.4 cents per 100 lb., which is deducted from the joint rates into New York before prorating the remainder on the basis of divisional arrangements among participating line-haul roads. The examiners recommend for the future an allowance of 6.5 cents per 100 lb. on traffic which receives car-float service; and, on traffic which is lightered, a scale of allowances ranging from 6.5 cents per 100 lb., when joint rates, or divisions of joint rates, are 15.5 cents or less per 100 lb., to 11 cents per 100 lb., when the joint rates, or divisions of joint rates, are 20 cents or more per 100 lb. The present plan of deducting the allowances before prorating would be continued.

The higher allowances, according to the examiners, should be still further increased by the same percentages as the joint rates between New York and points in Official Classification territory were increased in Ex Parte 162, which was decided after the hearing in the present proceeding. Although only the complaining Jersey Central would be eligible for retroactive relief, the allowances recommended for the future would apply to all New-York-harbor roads.

In the latter connection, the proposed report observed that "the practical necessity for uniformity in allowances to all harbor lines, in order to prevent diversion of traffic from harbor lines that may increase their allowances to competing harbor lines that do not make such increases, . . . is not disputed."

Retroactive Provision — The examiners make different recommendations as to what should be awarded the Jersey Central in the way of retroactive relief from the date its complaint was originally filed—July 3, 1944. Examiner Mackley would make the retroactive adjustment on the basis of the allowances recommended for the future. Examiner McGrath would make it on a basis which would reflect what the allow-

ances would have been during the retroactive period if they had been adjusted upward when general freight-rate increases were made.

To arrive at the McGrath basis, a start is made with the 3-cent allowance which was originally in effect. Then come calculations to determine what the allowance would have become if it had been increased by the same percentages as the joint rates involved were raised in all the general proceedings from 1915 through the Ex Parte 162 adjustment, which became effective January 1, 1947. The calculations indicate that the allowance on such a basis would have been 6 cents on some commodities and 6.4 cents on others from the July 3, 1944, date of the complaint until June 30, 1946; from July 1, 1946, until December 31, 1946, it would have been 6.5 cents and 7 cents, respectively; and on January 1, 1947, it would have become 7.5 cents and 8 cents, respectively.

The Jersey Central complaint is based on the general contention that the present allowances are insufficient to cover the cost of lighterage and float services, and that the deficiency is particularly burdensome to the complainant because of its short rail hauls. Evidence in support of this general contention was summarized in the proposed report as follows:

"Complainant characterizes the Jersey Central as essentially a terminal carrier. Its longest rail haul is 191 miles between Jersey City, N. J., and Scranton, Pa. . . . Its average haul on interline harbor traffic is 91 miles. It, therefore, is not enabled to recoup, from its line-haul revenues, of which it receives a division in addition to the harbar allowance, the loss sustained on its harbor service. For example, the freight charges on interline carload traffic handled by the Jersey Central in lighterage service during May, 1944, after deducting the allowance of 4.4 cents, averaged 38.6 cents, of which the road-haul revenue of the Jersey Central averaged 6.4 cents, or about 16.5 per cent.

Advantage of Long Haul—"By contrast, the lines of some of the harbor defendants, such as the New York Central, the Erie, and the Pennsylvania, extend to or beyond Chicago, and these carriers receive the entire revenues on New York harbor traffic local to their lines, and the divisions of joint rates to and from the divisional gateways on interterritorial harbor traffic."

These roads, as the proposed report puts it, oppose the complaint "mainly on the ground that they would derive no material benefit from an increase in existing harbor allowances." Along with other harbor lines, they take the position that the allowances "were never intended to cover the costs of performing the harbor service, or to have any relation to such costs, but . . . have always been, and should continue to be, the result of bargaining between the carriers."

Pointing out that two of the harbor-line defendants, the Lehigh Valley and Delaware, Lackawanna & Western. like the complaining Jersey Central, have relatively short hauls, the proposed report notes that those two defendants favored an increase in the amount of the allowance "during negotiations which preceded the filing of the complaint." It added that they are still willing to join with the other harbor lines in working out increased allowances on an agreed basis; but they are of the view that commission action to require the allowances proposed in the complaint "would operate to diminish the revenues of their connections," and that the latter would then "endeavor to influence the routing of traffic to other ports."

Western trunk-line defendants oppose any change in the allowances which would operate to increase the measure of their participation therein. They note that their participation is an integral part of division arrangements between them and their eastern connections, and that such division arrangements are now in the process of negotiation. The report's recommended findings contemplate that the western lines shall participate in the proposed higher allowances in the same proportion as they participated in allowances observed prior to the general rate increase of 1938—such findings to be "without prejudice to any different adjustment that may result from the pending negotiations between these defendants and their eastern connections."

In arriving at the proposed report's recommended basis of higher allowances, the examiners rejected the set-up proposed by the Jersey Central on the basis of a formula derived from cost studies. As applied to car-float and lighterage traffic handled by the complainant during May, 1944, that formula would have produced allowances averaging 6.8 cents per 100 lb. for car floatage and 15.4 cents for lighterage.

Chicago Hearing in Ex Parte 166 at Hotel Hamilton

The November 3 Chicago hearing on the railroads' Ex Parte 166 application for a permanent increase of 27 per cent in freight rates will now be held at the Hotel Hamilton in that city. The original announcement of the hearings, which will be held before the Interstate Commerce Commission's Division 2, assigned the Chicago sessions to the Hotel LaSalle.

Six Automobile Manufacturers Assail Railroad Rates

Six automobile manufacturers—Chrysler, Hudson, Nash-Kelvinator, Packard, Studebaker and Willys-Overland—have filed a complaint with the Interstate Commerce Commission in which they allege that railroad rates on new passenger automobiles and trucks from their plants are relatively higher than those from the assembly plants of Ford and General Motors.

Among other things, the complainants noted that the commission in 1945 found that maximum reasonable rates for the transportation of new cars should not exceed 75 per cent of the contemporeaneous first-class rates, but later that year "upon petition of certain defendant railroads primarily interested in General Motors and Ford" increased the maximum to 85 per cent. Most of the evidence in that proceeding, they said, related to conditions in 1939 and the early years of World War II.

"It was contended by some of the complainants . . . that the commission's determination . . . was contrary to and failed to give full effect to the evidence," the complainants continued. "Without waiving that contention, complainants allege that greatly changed conditions have occurred since the period to which such evidence related; that since the commission's determination there have been reductions and increases in freight rates which have aggravated the previously existing disparity in rates; and that there have been important changes in practices and competitive considerations affecting the transportation of new automobiles and trucks and the rates to be charged therefor."

Representation of Employees

The Brotherhood of Railway and Steamship Clerks has replaced the Committee of Duluth, Missabe & Iron Range Coal Dock Employees as the representative of D. M. & I. R. coal dock employees, other than clerks, and the Brotherhood of Railroad Trainmen has supplanted the Order of Railway Conductors of America as the representative of road conductors employed by the Ahnapee & Western, as the result of recent elections which have been certified by the National Mediation Board.

The N. M. B. also has certified the Brotherhood of Railroad Signalmen of America, on the basis of a check of representation authorizations, to extend its coverage of Central of Georgia signal department employees to include signal inspectors. The board's report observed that employees who perform the work of signal inspection on the C. of G. are carried on the road's payrolls as circuit draftsmen.

A check of representation authorizations also was conducted by the N. M. B. to determine the bargaining agents for several classes of Alabama State Docks and Terminals employees, all of whom formerly were without representation. As a result, machinists are now represented by the International Association of Machinists; boilermakers by the International Brotherhood of Boilermakers, Iron Ship Builders and Helpers of America; carmen, including their helpers and apprentices, by the Brotherhood of Railway Carmen of America; and powerhouse and railway shop laborers by the International Brotherhood of Firemen & Oilers, Helpers, Roundhouse and Railway Shop Laborers. Each of the foregoing unions operates through the Railway Employees Department, American Federation of Labor.

Finding that the "preponderant duties" performed by Nashville Terminal yard dispatchers, who are now represented by the Brotherhood of Railway Clerks, are essentially similar to those performed by crew dispatchers and crew clerks, and that such employees are generally included in the craft or class of clerical, offices, station and storehouse employees, the board has concluded that N.T. yard dispatchers, including chief yard dispatchers, are also a part of the clerical craft.

The N.M.B.'s investigation was instituted by the American Train Dispatchers Association, the application of which was subsequently dismissed. The A.T.D.A. contended that yard dispatchers employed on the N.T. perform service which places them in the craft or class of train dispatch-

ers as "generally established and widely recognized" on railroads throughout the country.

The B. of R. C., however, contended that yard dispatchers constitute a component part of the commonly known craft or class of clerical, office, station and storehouse employees. It further asserted that the title "yard dispatcher" does not accurately reflect the duties and responsibilities of the employees involved in the dispuate and that "crew dispatcher" would more appropriately describe their duties and responsibilities.

In its discussion of the case, the N.M.B. noted that N.T. chief yard dispatchers and yard dispatchers have been represented by the Clerks' brotherhood for nearly 30 years, are carried on the yard clerical seniority roster and are included with clerical employees in the N.T.'s monthly reports to the Interstate Commerce Commission.

The board also agreed with the B. of R. C. contention that the duties of the yard dispatchers are essentially the same as those of "crew dispatchers."

As the result of recent elections which have been certified by the N.M.B., the United Chemical Workers, Congress of Industrial Organizations, has replaced District 50, United Mine Workers of America, as the representative of Delray Connecting machinists, electrical workers, carmen, including their helpers and apprentices, railway shop laborers and powerhouse and maintenance of way employees, and the Brotherhood of Railroad Police and Special Agents (independent) has supplanted the National Council, Railway Patrolmen's Union, American Federation of Labor, as representative of special officers employed by the Northern Pacific Terminal of Oregon.

The board also has certified the Railway Employes' Department, A. F. of L., System Federation No. 121, to represent Texas & Pacific and Texas Pacific-Missouri Pacific Terminal of New Orleans mechanical department foremen. These employees formerly had been without representation.

Would Lift Ban on Rail-Owned Air Lines

(*Continued from page 53*)

Way to Efficiency — According to Judge Fletcher, coordination of the country's transportation facilities through the "organization and development of transportation companies, each in a position to give the public whatever type of transportation is most desirable," would eliminate "duplication of effort and waste of energy and money." "In this way," he said, "the tendency would be to develop all types of transportation in the field where each is most effective. Such a policy would not impair competition; it would stimulate it. With the country served by a hundred transportation companies, there would be plenty of competition. There is a general agreement by regulating bodies, business men and students of transportation that railroads should be permitted to acquire and operate air lines, provided there is a finding that the public interest would thereby be promoted."

Judge Fletcher also filed with the A. P. C. a statement dealing with selection of sites for new airports in close proximity to railroad rights-of-way. The statement observed in part that there is a serious danger of accidents, particularly in the taking off and landing of planes where existing railroad facilities are involved, and that such hazards should be avoided in future airport planning.

Mr. Glacy, reviewing the history of the B. & M.'s and M. C.'s development of and financial interest in Northeast Airlines, Inc.—the two roads sold the balance of their stock in the air carrier in 1945—told the commission that active participation by the B. & M. and M. C. in air line transportation did not "stifle in any way air line growth, but, on the contrary, was instrumental in developing a vigorous and financially sound air line corporation and by doing so contributed substantially to the advancement of transportation by air throughout New England . . ." Mr. Glacy said that the main purpose of his appearance was to "recite our experience in the air line business in the hope that it will disprove the favorite arguments of the opponents to surface carriers' participating in air transportation."

Boston & Maine Experience — According to Mr. Glacy, the B. & M. and M. C. in 1943 owned 50 per cent of Northeast Airlines outstanding common stock, but decided to relinquish this controlling interest because the railroads were "given to understand" that certificates to operate between Boston, Mass., and New York, and Portland, Me., and New York would not be granted to Northeast so long as the railroad control existed. In the same year, he added, the Civil Aeronautics Board dismissed an application filed by the B. & M. and M. C. for approval of control of Northeast, which, he said, is now an "independently operated air line which owes its development and existence to the pioneering and capital ventured by railroads who by law are now barred from participation in air transportation services to the public."

"In reaching this decision, the board found that, although the . . . railroad group controlled Northeast . . . such control had not been increased since the effective date of the Civil Aeronautics Act, and consequently it was unnecessary for the board to pass on the application," Mr. Glacy continued. "The board is required to approve or disapprove acquisition of control. The board stated that 'while we do not believe that Congress intended us to exercise jurisdiction over control relationship created prior to the effective date of the . . . act and existing unchanged from that date forward, we do believe that we possess jurisdiction in the case where the extent or effect of such control has increased.'

"The fact remained, however, that although the . . . board found no violation because control had been secured prior to the . . . act, it found that control did exist contrary to its interpretation of the intent of the act and would have, therefore, to be considered in awarding of additional routes."

Mr. Glacy said that although the B. & M. and M. C. have no immediate plans for reentering the air-transport field, they are still very much interested in the subject and may want to reenter the field in the future. He added that it has been the policy of the two roads to keep abreast of all new developments in the field of transportation and "wherever possible" to make use of new technique and facilities of transport in its own operation.

Pioneers in New England—"It is my sincere belief," he asserted, "that the Civil Aeronautics Act should be modified to remove the restrictions against surface carriers engaging in air transportation. The two railroads I represent established air service in northern New England before the

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Interior view of modernized Lehigh Valley coach

Recently rebuilt at the road's Sayre, Pa., shops, this coach was stripped down entirely, leaving only the underframe, the ends and a portion of the frame. Other parts of the car are new except the trucks, which are of the six-wheel type. The air-conditioned coach seats 76 persons and its interior color scheme is of greenish hue. Seats are of the highback type with sponge rubber cushions upholstered in dark green figured mohair. The window shades are of silk-faced Pantasote of a pattern matching the seats. Tubular-design, continuous luggage racks are of satin finish aluminum and there are individually-controlled lights over each seat. The windows are of the wide-vision type of double-glazed shatterproof glass. In the car body and the washroom the floor is covered with green asphalt tile blocks. The toilet room floor and walls are lined with hard tile blocks.

birth of this act because they recognized the desire and the need of the public for such service and from a sense of responsibility to provide such diversified facilities of transportation, on the rails, over the highways, and through the air as the public needs required and as they ere authorized and able to supply. . . .

"I do not claim that the two railroads were prompted to enter the field of aviation entirely from altruistic motives, but I confidently assert that an investigation of the relations of the railroads to the air carriers they originally created will clearly show that their primary interest had been at all times to insure to the public an adequate and dependable air service, rather than to limit, control or operate the air carriers to promote their railroad interests."

Mr. James contended that the railroads, through long years of experience, are thoroughly familiar with transportation conditions and requirements throughout their territory. Declaring that they have the facilities and personnel which can be assigned to the handling of passengers and cargo by air, he said that the railroads' many departments can assume "additional duties in connection with air transportation just as they have done in connection with highway transportation."

"More than one-half of the operating expenses of the air lines is for ground and other non-flying personnel," Mr. James continued in part. "Clearly, the reduced investment and economies resulting from joint utilization of facilities and personnel are in the public interest and in many territories would make possible the installation of air service, which . . . could not exist without huge government subsidy."

Mr. Webb told the A. P. C. that even if the C. A. B. grants the Mississippi Valley Transportation Company, a subsidiary of the Illinois Central, authority to operate as an air freight forwarder, the railroad, because it would act only as a forwarding agent, would not be in competition with the established air lines. He added that the purpose of the forwarding agency would be to obtain as much traffic as possible for the air lines because the I. C. would have a direct financial stake in achieving successful air freight transportation.

Also appearing before the A. P. C., K. N. Merritt, vice-president, traffic, Railway Express Agency, contended that neither the certificated air lines nor their joint ground-services agency, Air Cargo, Inc., have the experience, skill or equipment to render the type of air service for carriage of property that the public requires. According to Mr. Merritt, the recent interest of the certificated air lines in property transportation was fired by the "spectacular advances" made in the field by the "non-subsidized" cargo carriers.

Asserting that the certificated carriers are desirous of eliminating the latter as well as R. E. A. and other indirect air carriers, Mr. Merritt said that the public should not be made to finance "one side of this war between these conflicting interests, nor, pending the outcome of the battle, should the public be required to accept an inferior service and summarily be deprived of the services and facilities of the Railway Express Agency." The latter, he added, has become, during 20 years of air transportation service, an "integral part of the air transportation system of our country."

Congress Recalled for Special Session November 17

President Truman on October 24 issued a proclamation calling a special session of Congress to meet November 17. Although the White House announcement listed the need for action to deal with foreign aid and domestic price increases as the reasons for the call, Republican leaders have been saying that the legislative situation at the special session will be wide open.

Among the unfinished business left when the previous session adjourned on July 27 is the Bulwinkle-Reed bill to stay the operation of anti-trust laws with respect to carrier rate-making procedures and other joint actions approved by the Interstate Commerce Commission; the Reed bill to set up procedures for readjustment of railroad financial structures with provisions making such procedures applicable to railroads undergoing reorganization as well as to roads not yet in the hands of the courts; and the Howell-Hawkes bill to strike from the Railroad Unemployment Insurance Act the sickness and maternity benefits added by the Crosser Act and to put the unemployment-insurance taxes on a sliding-scale basis.

New Haven Dispute Settled

Mediatory efforts of the National Mediation Board resulted this week in settlement of the dispute over which the Brotherhood of Railroad Trainmen had threatened a strike against the New York, New Haven & Hartford at 6 a.m. October 31. As noted in the *Railway Age* of October 25, page 62, the dispute involved the interpretation of working rules, a matter which the railroad was willing to submit to the National Railroad Adjustment Board which has jurisdiction over such matters under the Railway Labor Act. The terms of the mediation settlement were not made public.

Reed Says He Advised Hawkes on I. C. C. Investigation

Senator Reed, Republican of Kansas, this week issued a statement commenting on charges made by Senator Hawkes, Republican of New Jersey, who had said that he was not consulted concerning the "policy followed" by a subcommittee of the Senate committee on interstate and foreign commerce with respect to its investigation of the Interstate Commerce Commission's administration of railroad reorganizations under section 77 of the Bankruptcy Act. Senator Reed is chairman of the subcommittee. The other members being Senator Hawkes and Senator Meyers, Democrat of Pennsylvania.

As reported in *Railway Age* of October 25, page 55, Senator Reed's announcement that the investigation would be deferred for "a month or more" drew a reply from Senator Hawkes, who said that he had not been consulted about the press releases issued by the former and that if he had been consulted, he would have "admonished against such a course on the simple ground that I do not believe it is a proper thing to bring any outside influence to bear on so vital and important a matter as is now before the Supreme Court."

Senator Hawkes' statement followed by several days Senator Reed's announcement that commencement of the hearings would be deferred principally because of a letter from the commission to the Supreme Court in which the commission said that should a writ of certiorari be granted in the Chicago, Rock Island & Pacific reorganization proceeding and the plan eventually be remanded to it, the commission would be prepared to give "full hearing on the facts and a report thereon as may be warranted." The court, however, on October 20 denied the writ, the ultimate effect of its decision being to require district court approval of the Rock Island plan which had been approved by the commission.

Senator Reed, in a statement distributed at his Washington, D. C., offices on October 27, said that he had a "fairly lengthy conference" with Senator Hawkes before leaving Washington on October 17. "At that time," he continued, "he voiced no criticism of the procedure and did not complain of not being consulted. He has been fully consulted all the way through so far as is possible in his almost complete absence while the subcommittee work was progressing."

According to Senator Reed, he informed Senator Hawkes on September 15 that the subcommittee would start the investigation in Washington on September 30. "I received a letter from Senator Hawkes dated September 16 acknowledging receipt of the call of the committee to begin the investigation," he added. "He made no objection whatever, nor offered advice as to what the committee or subcommittee should or should not do. He did advise that this date would conflict with the work of another committee of which he is a member and he would be unable to be present. He further said, 'I can certainly see you and Senator Meyers when you are here and, of course, I am vitally interested in this important subject.'"

The subcommittee chairman said he began "preliminary discussions" with respect to the hearing on September 25 and "by that time, the banking and insurance lobby, which has opposed all legislation of this type, had begun to get active." On the same day, he said, he received a wire from Senator Hawkes advising that he thought a "conference advisable" before the hearings started.

"I was confined to my hotel room with a severe cold on the one day Senator Hawkes was in Washington," Senator Reed commented. "However, by that time, in order to avoid conflict with rate procedure of the . . . commission, we had postponed the hearings for an indefinite date."

Supreme Court to Hear S. A. L. Incorporation Case

The United States Supreme Court has noted probable jurisdiction, thereby indicating its disposition to review the case wherein the Supreme Court of South Carolina has held that the reorganized Seaboard Air Line must comply with a provision

of that state's constitution which requires that companies operating railroads there must be incorporated under the laws of that state. The present Seaboard company, which took over the properties last year as the road's 15½-year receivership came to an end, is incorporated in Virginia.

In approving the new set-up and the financing involved, the Interstate Commerce Commission sanctioned the incorporation in Virginia, overriding the South Carolina constitution's provision with a holding that compliance with it would impose an undue burden on interstate commerce (see *Railway Age* of July 6, 1946, page 24).

Hearing on Western Passenger Fares November 10

Acting on the petition filed by the western railroads to increase, on five days' notice, their one-way and round-trip first-class and intermediate-class passenger fares, the Interstate Commerce Commission has assigned the proceeding, Docket No. 29862, for hearing on November 10 at the Hotel Hamilton, Chicago. Examiner Burton Fuller will preside.

As noted in *Railway Age* of October 18, page 74, the railroads, which also seek authority to increase their excess baggage rates, had asked that all upward revisions be made effective without hearing. They also are requesting modification of certain outstanding commission orders to permit the establishment of the proposed increased fares on intrastate traffic in Illinois, Iowa, Michigan, Minnesota, Montana, Nebraska, North Dakota, Texas and Wisconsin.

Under the proposed rates, one-way first-class fares in parlor and standard sleeping cars would be increased by 6.06 per cent or to approximately 3.5 cents per mile, with the round-trip fare being increased from approximately 2.75 cents per mile to approximately 2.925 cents per mile. Intermediate-class one-way fares in tourist sleepers would be increased from approximately 2.75 cents to 3 cents per mile, with the round-trip intermediate-class fare being increased from approximately 2.475 cents to about 2.7 cents per mile.

Official Territory Roads Don't Like Easier L. C. L. Credit

Official territory roads, with the exception of the New York, Chicago & St. Louis, have advised the Interstate Commerce Commission of their opposition to a petition filed in Ex Parte 73 by the Missouri-Kansas-Texas and the Texas & Pacific and their affiliates to extend to seven days the authorized time for the payment by shippers to railroads of transportation charges on less-than-carload freight. The commission also has received a petition filed by the St. Louis-San Francisco and the St. Louis, San Francisco & Texas joining in the request of the Katy and T. & P.

The petitioners' proposal, outlined in *Railway Age* of October 11, page 73, would extend from the present maximum of 96 hours to seven days the time within which they must present and collect bills on interstate l. c. l. shipments. While this would place credit arrangements for interstate l. c. l. shipments on the basis which Texas authorizes for intrastate shipments, it would not put the railroads on an equal basis with motor carriers and freight forwarders. Those railroad competitors have seven days in which to present l. c. l. freight bills and seven days after presentation in which to collect such bills—a total potential credit period of 14 days.

The Official territory roads said they opposed reopening the Ex Parte 73 proceeding because (1) their experience has demonstrated conclusively that the present rules and regulations have been and are workable and enforceable within Official territory; and (2) the proposed changes would increase the opportunity to discriminate unjustly. At the same time, they asserted that the proposed revision is not sought as a necessity but rather as a "mere convenience" to shippers and receivers of freight who desire to check their freight bills; and there would be no compensating advantages to the railroads.

Contending that relief, if any, should be granted only to the petitioning railroads, the Official territory carriers added that general liberalization of the credit rule would "increase materially" the financial burdens of the railroads and also would increase the number of railroad patrons taking advantage of credit arrangements, thereby raising the railroads' costs at a time "when, as demonstrated in Ex Parte 166, their costs already have reached the critical stage."

* * *

Celebrate 47 Years of Transporting Apples

On October 18, this Great Northern locomotive departed from Wenatchee, Wash., bound for the Twin Cities, with the 10,000th trainload of apples sent to market from that point since the fruit industry dispatched its initial full carload back in 1901. The cargo of the 85-car train was valued at $250,000. Atop the apple crates is "Appleland Princess" Lois Banghart.

Car Service

Interstate Commerce Commission Service Order No. 778-A, effective November 1, sets back, from that date until November 20, the effective date of Service Order No. 778, which is designed to prescribe railroad operating regulations for car movement (see *Railway Age* of October 18, page 80). It is understood that the postponement followed meetings between representatives of the railroads and Commissioner Johnson, who is also director of the Office of Defense Transportation. During the suspension period, it is expected that the order may be rewritten to clarify some of its provisions without altering its objectives.

I. C. C. Service Order No. 775, which provides for so-called "super-demurrage" charges, has been modified by Amendment No. 1, which makes the order applicable to freight cars of all types. Formerly, tank cars and Class "L" cars (other than covered hopper cars of the "LO" class) were exempt. The amendment became effective November 1.

I. C. C. Service Order No. 783, effective from October 22 until April 30, 1948, unless otherwise modified, appoints E. W. Coughlin agent for the commission at Chicago, with authority to reroute loaded cars to relieve congestion in the area embracing Minnesota, Wisconsin, Illinois, Kentucky, West Virginia, Virginia and the states north and east thereof.

I. C. C. Service Order No. 785, effective from October 29 until November 15 unless otherwise modified, directs the Texas & Pacific to reroute cars loaded with cotton and destined for compresses at Dallas, Tex., and west thereof. The order was issued because of congestion at those compresses; and it requires delivery of the

cars to the International-Great Northern at Fort Worth, Tex., or Longview, for forwarding to compresses at Hearne, Tex., Tyler, Waco, Marlin, and Houston.

I. C. C. Service Orders which maintain permit systems in connection with movements of coal to ports have been amended to set back their expiration dates for one year—from November 20 until November 20, 1948. The orders are No. 550 (lake ports); No. 551 (Hampton Roads, Va., ports); 552 (Middle Atlantic ports).

I. C. C. Service Order No. 558 (revised) which permits the substitution of refrigerator cars for box cars for shipments of fruit and vegetable containers and box shooks along the Pacific coast, has been modified by Amendment No. 5. The amendment, effective October 20, eliminates Washington, Nevada and northern Oregon from the origin territory to which the order applies, thus leaving it applicable to shipments from origins in California and Oregon, south of a line extending from Bond through Eugene, to destinations in California. The amendment also provides that the substituted reefers must be those "not suitable for fruit and vegetable loading."

Equipment and Supplies

Domestic Equipment Orders Reported in October

Domestic orders for 42 Diesel-electric locomotives and 13,208 freight-train cars (including 30 ordered by an industrial company), were reported in *Railway Age* in October. No passenger car orders were reported. The estimated cost of the locomotives is $9,000,000 and the freight-train cars will cost an estimated $51,600,000. Of the 13,178 freight-train cars ordered by railroads, 4,150 will be built in railroad shops. The accompanying table lists the orders in detail.

During the first 10 months of 1947, *Railway Age* has reported domestic orders for 448 Diesel-electric, 1 gas-turbine, 4 electric and 10 steam locomotives (costing an estimated $92,900,000), 86,699 freight-train cars (at an estimated cost of $349,900,000), and 275 passenger-train cars (the estimated cost of which is $22,737,000).

U. P. and G. N. to Spend Millions in Improvement Programs

The board of directors of the Union Pacific last week approved a $67,000,000 improvement program, to include the purchase of new rolling stock and the building of a new freight classification yard. G. F. Ashby, president of the U. P., said the new expenditures would be in addition to the $100 million already authorized for the U. P.'s "long-range postwar rebuilding program.'

The road will purchase new passenger, freight and refrigerator cars and Diesel-electric locomotives, and construct a freight classification yard at some point yet to be determined, he declared. Mr. Ashby said that the road "has never been in better physical condition," and that the new spending program is another phase of the U. P.'s "second rebuilding."

F. J. Gavin, president of the Great Northern, announced that that company would spend $7,600,000 for new freight cars and for new rail and necessary fastenings. The railroad's board of directors on October 23 approved the construction of 500 steel-sheathed box cars to be built in the G. N.'s shops at St. Cloud, Minn., and Superior, Wis., and authorized the purchase of 200 gondolas, 75 covered hopper cars, four lightweight steel baggage cars and 50,000 tons of new rail, plus fastenings. The new rail will be laid in 1948, Mr. Gavin said. The G. N. completed construction, early in October, of 500 box cars in its own shops and is awaiting delivery of materials to begin work on an additional 500 cars, the construction of which was authorized several months ago.

C. & O. Authorizes $10,900,000 Equipment Purchase

The board of directors of the Chesapeake & Ohio has authorized the purchase of 45 steam locomotives and 200 automobile cars at an estimated cost of $10,900,000. Inquiries on bids for the construction of this equipment will be made in the next few days. Fifteen of the locomotives will be of the 2-6-6-6 type with tractive force of 100,000 lb., and the remaining thirty will be heavy duty switching engines.

LOCOMOTIVES

The Norfolk & Western has ordered 10 2-8-8-2 freight locomotives from its Roanoke shops. The new locomotives will be of the Y6a class, similar to the 16 built at the shops in 1942 and 1943, and will cost about $2,000,000. They will have solid cast steel frames and roller bearings on all wheels. First of the new locomotives will be ready for service about four months after construction begins and they will be delivered thereafter at the rate of one a month.

FREIGHT CARS

The Chicago Great Western has ordered 10 70-ton gondola cars from the Pressed Steel Car Company. Delivery is scheduled for April, 1948.

IRON AND STEEL

The New York Central System has announced the placing of orders for 100,000 net tons of steel rails to meet system requirements for 1948. Frank S. Austin, manager, purchases and stores division, said the orders were placed with the Carnegie-Illinois Steel Company, the Bethlehem Steel Corporation and the Inland Steel Company in the United States and the Algoma Steel Company in Canada. The orders, the total cost of which is about $5,600,000, are for varying amounts of 132-lb., 127-lb. and 105-lb. rails.

SIGNALING

The American Locomotive Company has ordered two sets of intermittent inductive train control equipment from the General Railway Signal Company. This equipment will be installed on Diesel-electric freight locomotives for switching service on the Delaware & Hudson.

Locomotives

Date	Purchaser	No.	Type	Builder
Oct. 4	E. J. & E.	25	2,000-hp. D.E.-transfer	Baldwin
Oct. 4	S. P. & S.	3	1,000-hp. D.E.-sw.	Electro-Motive
Oct. 18	C. & E. I.	6	1,500-hp. D.E.-pass. (4 A and 2 B units)	Electro-Motive
Oct. 18	S. P.	3	6,000-hp. D.E.-pass.	American
Oct. 25	U. P.	5	2,000-hp. D.E.	Fairbanks, Morse

Freight-Train Cars

Date	Purchaser	No.	Type	Builder
Oct. 4	A. & W. P.	20	50-ton Hopper	Pullman-Standard
Oct. 4	Birmingham Southern	128	70-ton Hopper	Pullman-Standard
Oct. 4	C. B. & Q.	150	70-ton Cov. Hopper	R. R. Shops
Oct. 4	Georgia	75	50-ton Hopper	Pullman-Standard
Oct. 4	G. M. & O.	50	70-ton Gondola	Pressed Steel
Oct. 4	N. & W.	2,000	70-ton Hopper	R. R. Shops
Oct. 4	S. A. L.	400	50-ton Gondola	American Car & Fdy.
Oct. 4	West. of Ala.	30	50-ton Hopper	Pullman-Standard
Oct. 11	Amer. Steel & Wire Co.	30	70-ton Gondola	Haffner-Thrall
Oct. 11	C. & O.	1,000	50-ton Gondola	Pressed Steel
		500	70-ton Cov. Hopper	Ralston
		150	Caboose	American Car & Fdy.
Oct. 11	Western Maryland	1,000	55-ton Hopper	Bethlehem Steel
Oct. 18	A. C. L.	1,800	50-ton Box	American Car & Fdy.
		1,000	50-ton Hopper	American Car & Fdy.
		200	50-ton Pulpwood	American Car & Fdy.
		100	70-ton Phosphate	American Car & Fdy.
		60	Cov. Hopper	American Car & Fdy.
		800	50-ton Gondola	Pullman-Standard
Oct. 18	L. & N. E.	100	70-ton Cov. Hopper	American Car & Fdy.
Oct. 25	C. I. & L.	100	50-ton Box	Pressed Steel
Oct. 25	D. & R. G. W.	15	50-ton Tank	General American
Oct. 25	K. C. S.	500	70-ton Gondola	Pullman-Standard
Oct. 25	N. Y. C.	2,000	55-ton Hopper	Despatch Shops
	(For the P. & L. E.)	1,000	70-ton Hopper	Greenville

Supply Trade

Frank E. Ross, Jr. and **Robert M. Close** have announced the formation of a partnership to be known as the **St. Louis Railway Supply Company,** with an office at 2114 North Second street, St. Louis, Mo. Mr. Close operates the Aquart

Frank E. Ross, Jr.

Manufacturing Company, which company the partners will represent in addition to acting as manufacturers' representative for several other firms.

Mr. Ross entered railroad service in 1936 with the Terminal Railroad Association of St. Louis. He served as Diesel mechanical officer on the staff of the United States Railway Mission to Mexico from 1944 to July 1, 1945, when he joined Fairbanks, Morse & Co., as assistant to manager of the railroad division. In 1946 he was appointed sales engineer in charge of Diesel locomotive sales, which position he held until his present undertaking.

Mr. Close began his business career in 1933 as a commercial representative of the Southwestern Bell Telephone Company, St.

Robert M. Close

Louis, working in that capacity until 1937, when he joined Aquart as a salesman. He became a partner of the firm in 1942 and acquired a controlling interest in 1945.

The Permutit Company has announced the appointment of **Austin F. McCormack** as sales engineer in charge of its newly-established Rochester, N. Y., office. This office replaces the one formerly located in Syracuse, N. Y., and directed by **F. D. West,** who has retired after 29 years' service.

Harold H. Reed, formerly assistant manager of the New York district of the **Air Reduction Sales Company,** has been appointed manager of the district to succeed **W. S. Schoenthaler,** who has retired after 37 years of continuous service with the firm. **Oren M. Donohue,** formerly assistant sales manager, has been appointed assistant district manager, succeeding Mr. Reed, and **William B. Brower** succeeds Mr. Donohue.

Haig C. Dilsizian, formerly vice-president of **Templeton, Kenly & Co.,** Chicago, has been appointed exclusive manager of the company's export business, which operates as an independent unit from offices at 420 Lexington avenue, New York. The appointment of **E. A. Zimmerman** as eastern district sales manager for domestic sales also was announced.

Philip C. Staples, president of the Bell Telephone Company of Pennsylvania, has been elected a member of the board of directors of the **Baldwin Locomotive Works.**

The **Morrison Railway Supply Corporation** and its subsidiary, **Morrison Metalwald Process, Inc.,** have announced the establishment of offices in the Empire building, Birmingham, Ala. **Marvin B. Morrison,** vice-president and southern division manager, will be in charge of the new office.

G. J. Weihofen, who has been a member of the mechanical department editorial staff of the *Railway Age* in its New York office since April, 1946, will after November 2 be located in the Chicago office, as associate editor, *Railway Age* and Railway Mechanical Engineer. Adequate coverage of railway mechanical developments in a territory covering more than half of the United States is beyond the capacity of a single individual, and Mr. Weihofen, under the direction of E. L. Woodward, will now share in the cultivation of that territory.

OBITUARY

George A. Sutherland, sales representative of the Buckeye Steel Castings Company, at Chicago, died suddenly on October 16, at his home in Crystal Lake, Ill.

Henry Billing, vice-president in charge of railway sales of the Collins Oil & Manufacturing Co. for the last nine years, died at his home in Elizabeth, N. J., on October 15. He was 56 years old. Before joining the Collins Company, Mr. Billing worked in the car department of the New York Central at Albany, N. Y., for 17 years.

Organizations

The annual dinner of the **New York Railroad Club** will be held in New York on December 11. A. A. Borgading of the American Car & Foundry Co. has been appointed general chairman of the dinner committee.

The **Central Western Shippers Advisory Board** will hold its 56th regular meeting on December 8 and 9, at the Newhouse hotel, Salt Lake City, Utah.

The **Pacific Railway Club** will meet on November 13, at the Sacramento hotel, in Sacramento, Cal. The subject of the meeting will be "Avoiding Accidents, Fires, and Explosions."

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

AIR BRAKE ASSOCIATION.—F. C. Goble, N. Y. N. H. & H. R. R. Co., New Haven 6, Conn.

ALLIED RAILWAY SUPPLY ASSOCIATION. — C. F. Weil, American Brake Shoe Company, 332 S. Michigan Ave., Chicago 4, Ill.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—E. P. Soebbing, 1450 Railway Exchange Bldg., St. Louis 1, Mo. Annual meeting, January 21-23, 1948, Rice Hotel, Houston, Tex.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York 6, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, June 8-10, 1948, Hotel Stevens, Chicago, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, 1103 Cleveland St., Evanston, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise LaChance, Room 901, 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 21-23, 1948, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York 6, N. Y.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION. —W. J. Walsh, B. & O. R. R., Baltimore 1, Md. Annual meeting, April 5-7, 1948, Hotel Roosevelt, New Orleans, La.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 16-18, 1948, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—Clifford G. Massoth, Illinois Central Magazine, 135 E. 11th Pl., Chicago 5, Ill.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. P. Nye, Tower Bldg., Washington 5, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, Asst. Secretary, 1916 Race St., Philadelphia 3, Pa. Spring meeting and Committee Week, March 1-5, 1948, Hotel Statler, Washington, D. C. Annual meeting, June 21-27, 1948, Book-Cadillac Hotel, Detroit, Mich.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS. —C. E. Davies, 29 W. 39th St., New York 18, N. Y. Annual meeting, December 1-5, 1947, Chalfonte-Haddon Hall, Atlantic City, N. J.
Railroad Division.—E. L. Woodward, Railway Mechanical Engineer, 105 W. Adams St., Chicago 3, Ill.

AMERICAN TRANSIT ASSOCIATION.—A. W. Baker, 292 Madison Ave., New York 17, N. Y.

AMERICAN WOOD-PRESERVERS' ASSOCIATION. — H. L. Dawson, 1427 Eye St., N. W., Washington 5, D. C. Annual meeting, April 27-29, 1948, St. Paul, Minn.

ASSOCIATED TRAFFIC CLUBS OF AMERICA, INC.—R. A. Ellison, Cincinnati Chamber of Commerce, 1203 C. of C. Bldg., Cincinnati 2, O.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—W. F. Ziervogel, 605 S. Ranken Ave., St. Louis 3, Mo.

(Continued on page 71)

Financial

BALTIMORE & OHIO. — *Equipment Trust Certificates.*—This road has sold $2,840,000 of equipment trust certificates, series W, to Halsey, Stuart & Co. and associates on a bid of 99.6191 for an annual dividend rate of 2⅛ per cent. (See *Railway Age* of October 25, page 717).

CHICAGO & ILLINOIS MIDLAND.—*Notes.*—Division 4 of the Interstate Commerce Commission has authorized this road to issue and sell at par not exceeding $1,000,000 of 4 per cent unsecured serial notes, the proceeds of which will be applied toward the purchase of 350 70-ton gondola cars, at a unit cost of $4,444, from the Pullman-Standard Car Manufacturing Company. The notes will mature in five equal semi-annual installments of $200,000, starting December 1, 1956. They will be sold to the trustees of three service annuity funds maintained under the pension systems of the C. & I. M.'s parent, the Commonwealth Edison Company, and certain of its subsidiaries. As the amount did not exceed $1,000,000 sale of the issue was exempt from the commission's competitive-bidding requirements.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $2,240,000 of Series AA equipment trust certificates, the proceeds of which will be applied toward the cost of 750 all-steel automobile cars to be built in the applicant's shops. The equipment includes 500 40-ton cars, each equipped with loading devices, at an estimated unit cost of $4,051, and 250 50-ton cars, without loading devices, at an estimated unit cost of $4,160. The certificates will be dated October 1 and will mature in 20 semi-annual installments of $112,000 each, starting April 1, 1948. The commission's report also approves a selling price of 99.5799 with a 1⅞ per cent interest rate, the bid of Salomon Brothers & Hutzler and associates, on which basis the average annual cost will be approximately 1.96 per cent.

DENVER & RIO GRANDE WESTERN.—*Preferred Dividend.* — This company has declared a dividend of $5 a share on its preferred stock, payable on November 25 to stockholders of record on November 10. This dividend will be the first paid by the road since 1911 and will represent a 50 per cent payment on the accrued dividends for the years 1943-44-45-46. The company was reorganized as of 1943. Wilson McCarthy, president, is reported to have said the board of directors "believes the full amount of the accrued dividends should be paid as soon as possible and will consider at its December meeting payment of the remaining accrued dividend of $5."

ERIE.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $6,850,000 of equipment trust certificates, the proceeds of which will be applied toward the purchase of 26 Diesel-electric locomotives, estimated to cost $8,592,208, as outlined in *Railway Age* of October 4, page 74. The certificates will be dated October 15 and will mature in 10 equal annual installments, starting October 15, 1948. The report also approves a selling price of 99.54 with a 2 per cent interest rate, the bid of the First National Bank of New York and associates, on which basis the average annual cost will be approximately 2.09 per cent.

FLORIDA EAST COAST.—*Reorganization.*—Acting upon petitions filed between April 8 and June 9, the Interstate Commerce Commission has reopened for further consideration and assigned for oral argument the proceeding wherein on April 8 the commission modified its approved plan for the reorganization of the Florida East Coast to permit that road's merger or consolidation with the Atlantic Coast Line. The April 8 order, made public May 20, was a third supplemental report in the proceeding and resulted in a reversal of the earlier modified plan under which control of the F. E. C. would have rested in the St. Joe Paper Company, which in turn is controlled by the Alfred I. duPont estate. The commission's October 16 notice assigned the proceeding for oral argument on January 7, 1948, at its Washington, D. C., offices.

Those filing petitions for reconsideration, with respect to the April 8 order, which was outlined in *Railway Age* of May 24, page 1072, included, in addition to St. Joe, the Seaboard Air Line, the Railway Labor Executives Association, the Brotherhood of Railroad Trainmen and various Florida municipalities, chambers of commerce and traffic associations.

MISSOURI PACIFIC. — *Reorganization.* — Division 4 of the Interstate Commerce Commission has conditionally authorized F. O. Frisk, W. R. Cubbins and E. L. Foley, as a protective committee for holders of Missouri Pacific 5¼ per cent secured serial gold bonds, to solicit, pursuant to section 77 (p) of the Bankruptcy Act, authorizations to represent holders of such bonds. As reported in *Railway Age* of September 6, page 77, the commission had deferred action on the applications filed by this and another committee until a circuit court decision on the pending appeals from the order of the district court approving the plan of reorganization for the M.P. The plan has since been remanded to the commission and assigned for further hearing at Washington, D.C., on November 18.

The commission noted that the form on which the committee was receiving its authorizations to act for subscribing bondholders stipulated that no provision is or will be made for compensation of committee members out of any borrowed or advanced funds and that any such compensation shall be paid out of the debtor's estate only as may be authorized by the commission and the court. "We do not interpret the statute as permitting any compensation to committee members out of the estate of the debtor," the commission observed. "Our action on the application . . . cannot be construed as indicating in any way our approval at any time of an allowance out of the debtor's estate to members of the committee for compensation for services."

NEW YORK, NEW HAVEN & HARTFORD.—*Bonds of Providence & Worcester.*—Division 4 of the Interstate Commerce Commission has modified its order of September 25 to permit this road's lessor, the Providence & Worcester, to retain the premium received by it on the sale of $1,500,000 of first mortgage Series A 4¾ per cent bonds, and to apply 1/40 thereof on each interest-payment date against the installment of the P. & W.'s bond interest payable by the lessee, or, in the event of redemption of said bonds, to apply any unexpended balance of such premium to the payment of any redemption premium thereon. As noted in *Railway Age* of October 11, page 88, proceeds of the bond sale will be applied toward the retirement of a like amount of first-mortgage 4 per cent bonds.

SEABOARD AIR LINE.—*Equipment Trust Certificates.*—Division 4 of the Interstate Commerce Commission has authorized this road to assume liability for $4,500,000 of Series B equipment trust certificates, the proceeds of which will be applied toward the purchase of equipment, estimated to cost $6,125,079, as outlined in *Railway Age* of October 4, page 74. The certificates will be dated October 15 and will mature in 15 equal annual installments starting October 15, 1948. The report also approves a selling price of 99.1699 with a 2⅛ per cent interest rate, the bid of Salomon Brothers & Hutzler and associates, on which basis the average annual cost will be approximately 2.24 per cent.

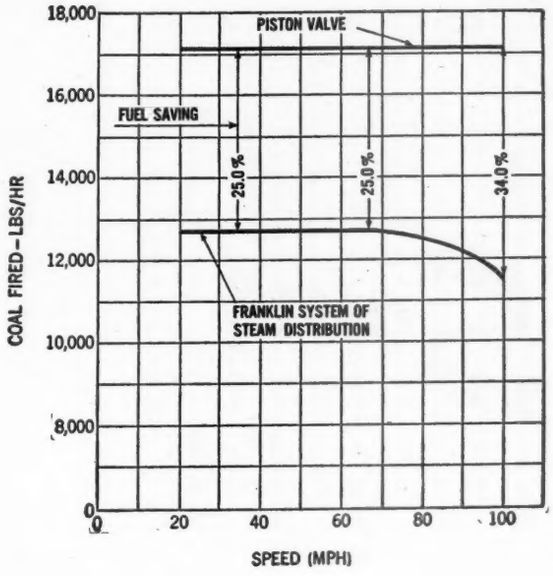
TENNESSEE CENTRAL.—*R. F. C. Loan.*—Division 4 of the Interstate Commerce Commission has approved this road's plan to borrow not exceeding $250,000 from the Reconstruction Finance Corporation, the proceeds of which will increase the applicant's working capital and enable it to meet its current financial obligations. As collateral security for the loan, the applicant will deposit and pledge with the R. F. C. $400,000 of its Series A first-mortgage 4 per cent bonds, due April 1, 1967.

WILLAMINA & GRAND RONDE.—*Promissory Note.*—This road has applied to the Interstate Commerce Commission for authority to extend the maturity date of an $83,584 promissory note from December 31 to December 31, 1950. The note is payable to the Long-Bell Lumber Company. The applicant said it already has paid off $98,539 in notes to Long-Bell, but that it is not in a position to pay the $83,584 "at this time or in the near future."

WHEELING & LAKE ERIE. — *Equipment Trust Certificates.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for $3,940,000 of Series O equipment trust certificates, the proceeds of which will be applied toward the acquisition of 250 steel-sheathed 50-ton box cars, at an estimated unit cost of $4,030, and 1,000 all-steel 70-ton hopper cars, at an estimated unit cost of $3,941. The box cars will be procured from the American Car & Foundry Co. and the hoppers from the Ralston Steel Car Com-

News Department continued on the second left-hand page.

LESS FUEL



This curve shows a comparison of fuel consumption by a modern locomotive when equipped with piston valves and when equipped with the Franklin System of Steam Distribution. In both cases horsepower at rear of tender is the same. It is the drawbar horsepower developed by the piston-valve locomotive with steam consumption of 90,000 lbs. per hour.

Computations based on:

Type 4-8-4

Cylinders 25" x 32"

Driving Wheels 80"

Boiler Pressure 300 lb

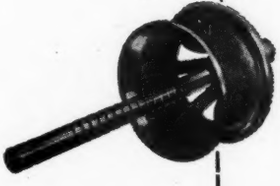
Steam Temperature 730° F

Total Heating Surface 4225 sq ft

Grate Area 100.2 sq ft

used by a locomotive equipped with the Franklin System of Steam Distribution

This curve shows the savings in fuel consumption that may be expected from a modern locomotive when it is equipped with the Franklin System of Steam Distribution.



FRANKLIN RAILWAY SUPPLY COMPANY, INC

NEW YORK • CHICAGO • MONTREAL

STEAM DISTRIBUTION SYSTEM • BOOSTER • RADIAL BUFFER • COMPENSATOR AND SNUBBER • POWER REVERSE GEA
AUTOMATIC FIRE DOORS • DRIVING BOX LUBRICATORS • STEAM GRATE SHAKERS • FLEXIBLE JOINTS • CAR CONNECTI

Some vital statistics

ABOUT LIMA-HAMILTON CORPORATION

The stockholders meeting of Oct. 1, 1947 that brought into being the Lima-Hamilton Corporation combined two of the country's oldest and best-known manufacturing concerns in the heavy equipment field.

LIMA LOCOMOTIVE WORKS – has been a large producer of steam locomotives for 78 years. In 1925 this company introduced the now famous "Experimental A-1" the forerunner of today's super-power steam locomotive. The Lima Shay Geared locomotive was a factor in the revolutionization of the logging industry. The company's wartime products included tanks and locomotives for the U. S. Army as well as locomotives for the reconstruction of France, Poland and China.

GENERAL MACHINERY CORPORATION – with origins dating back to 1845, has a well established reputation in the diesel engine business. The "Niles" line of heavy and medium machine tools for railroad use is widely known throughout the industry. For the past four years General Machinery has been engaged in extensive development work with a free-piston gas generator turbine for the engine field and use in locomotives, ships and stationary power plants.

LIMA-HAMILTON CORPORATION plans to manufacture the Lima-Hamilton Diesel locomotive as well as a complete line of steam locomotives and a comprehensive line of heavy railroad and industrial equipment. In addition, it is planned to continue the development work on the free-piston gas generator turbine for locomotive use. Facilities of the two companies (within 100 miles of each other) is expected to complement manufacturing lines and effect economies in operation.

LIMA-HAMILTON CORPORATION

WORKS Lima, Ohio
Hamilton, Ohio
Middletown, Ohio

With the following divisions
Lima Locomotive Works • Niles Tool Works Co.
Lima Shovel & Crane Division • Hooven, Owens, Rentschler Co.

pany. The certificates would be dated December 1 and sold on the basis of competitive bidding.

Average Prices Stocks and Bonds

	Oct. 28	Last week	Last year
Average price of 20 representative railway stocks ..	48.33	49.28	47.26
Average price of 20 representative railway bonds ..	87.10	87.46	88.84

Dividends Declared

Atlantic Coast Line (correction of date).—$1.00, quarterly, payable December 12 to holders of record November 14.

Great Northern.—preferred, $1.50, payable December 10 to holders of record November 10.

International of Central America. — 5% preferred (accum.), $1.25, payable November 15 to holders of record November 5.

Pittsburgh, Bessemer & Lake Erie.—6% preferred, $1.50, semi-annually, payable December 1 to holders of record November 15.

Construction

CHICAGO & NORTH WESTERN.—This company has applied to the Interstate Commerce Commission for authority to construct an 18-mile line from a point near Belle Fourche, S. D., to a point in Crook county, Wyo. The segment would serve shippers of clay products and livestock.

NEW YORK CENTRAL.—This road has announced plans to spend nearly $50,000 for improvements and additions to the No. 1 storehouse in its West Albany, N. Y., shops. The Otis Elevator Company has been given a contract for installation, starting in January, of a new 3,500-lb. capacity freight elevator in the building. Otis expects to complete the work in March. The warehouse is used for storing locomotive and car repair parts. It is 501 ft. long, 42 ft. wide, with part of it two stories high and part one story high. A. R. Jones, Mohawk division engineer, said work planned includes extension of the second story by 149 ft., strengthening of existing second-floor supports, and extension of the roof over an open platform.

NORFOLK & WESTERN.—This company has awarded a contract to John P. Littlejohn Co., Lynchburg, Va., for the complete modernization of its passenger station at Roanoke, Va. The new station will occupy the same site as the present one. The street side of its waiting room will be of plate glass 17 feet high and the present ticket office will be replaced by a semi-circular counter in the center of the room which will be backed by a 20-ft.-wide map of the N. & W. system done in color. There will be upholstered chairs and couches in the waiting rooms and the floors will be black and gray terrazzo. The walls will be of gray-red glazed tile and the heating will be of the radiant type. A modern air-circulating system will be installed. The train information board will be placed at the back of the ticket office hall facing the new cigar stand which will be in the center of the concourse. The concourse, extending over three of the four passenger tracks, will be 72-ft. long. Two sets of graduated stairs for outgoing passengers will lead from the concourse to the track level and a pair of escalators will carry incoming patrons to the upper floor. An up-to-date public address system will be installed and the waiting room ceilings will be surfaced with acoustical plaster. Actual construction will take about one year.

Railway Officers

EXECUTIVE

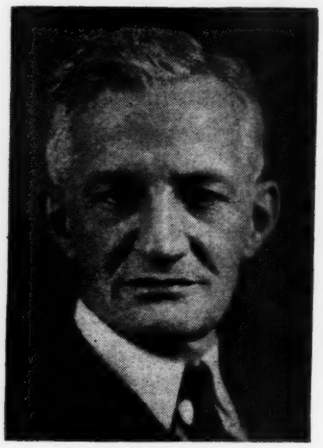
Arthur J. Horton, general superintendent, Central District, of the Chicago, Burlington & Quincy, with headquarters at Burlington, Iowa, has been elected vice-president of the Colorado & Southern (part of the Burlington System), at Denver, Colo. He succeeds **Robert Rice,** who has retired after 49 years of service.

Thomas F. Powers, whose retirement as assistant to vice-president—mechanical, of the Chicago & North Western, at Chicago, was reported in *Railway Age* of October 25, was born on October 20, 1882, at Winona, Minn., and joined the North Western in 1899, as an apprentice. He subsequently held various positions, including that of mechanic, foreman, general foreman-general boiler inspector, assistant superintendent of motive power and machinery, superintendent of motive power, chief mechanical officer and assistant to vice-president—mechanical.

James S. Thorp, assistant to president of the Delaware, Lackawanna & Western at New York, has retired. Mr. Thorp was born at Gainesville, Va., on February 1, 1885, and was graduated from Virginia Polytechnic Institute in 1910. He entered railroad service in 1902 as machinist apprentice with the Southern at Spencer, N. C., and served as machinist until entering college in 1906. In 1912 he became draftsman on the electrification of the New York, New Haven & Hartford between Stamford, Conn., and New Haven. From 1913 to 1917 Mr. Thorp served successively as assistant engineer on Norfolk & Western electrification; senior assistant engineer for British Insulated & Helsby Cables Co., on the Victorian railways electrification at Melbourne, Australia, and in the engineering department of Air Nitrates Company, Muscle Shoals, Ala. He became plant manager for an electrical porcelain manufacturer in 1919 and in 1923 he was appointed distribution engineer, Illinois Central terminal improvements at Chicago, becoming assistant electrical engineer there in September, 1927. Mr. Thorp went with the Lackawanna in August, 1928, as electric traction engineer at Hoboken, N. J., becoming electrical engineer in August, 1930, and assistant to vice-president, operations and maintenance on June 15, 1945. He was appointed assistant to president on April 1, 1946.

FINANCIAL, LEGAL AND ACCOUNTING

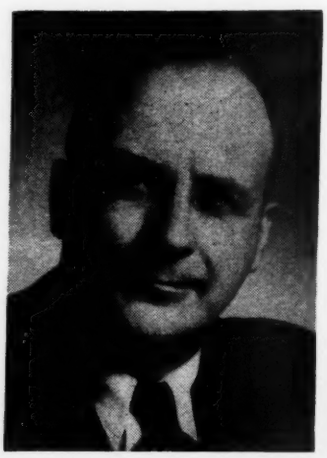
Walter Walmsley, auditor of revenues of the Canadian National at Montreal, Que., has been appointed assistant comptroller of the system, with the same headquarters, succeeding **George A. Godfrey,** who has retired. **John Henry Spence,** auditor of agencies at Montreal, has been appointed auditor of revenues, and **Leslie McCammon,** chief accountant, succeeds Mr. Spence as auditor of agencies. Mr. Walmsley was born at Southport, England, and joined the Grand Trunk at Montreal as a clerk in the office of the auditor of



Walter Walmsley

freight accounts in 1907. He progressed through numerous clerical positions to chief clerk in 1919, assistant to auditor of revenues in 1921, auditor of freight accounts, C. N. R., in 1923, and to auditor of freight and miscellaneous accounts in 1943. Mr. Walmsley was appointed auditor of revenues in 1945, which position he held at the time of his recent appointment as assistant comptroller.

Mr. Godfrey, a native of Brighton, Ont., began his railway career in the Grand Trunk freight office at Trenton, in 1902.



John Henry Spence

After serving in the transportation department in freight, passenger and express service at various points on the line, he transferred to the accounting department as traveling auditor and later to headquarters staff. In 1921 he was appointed

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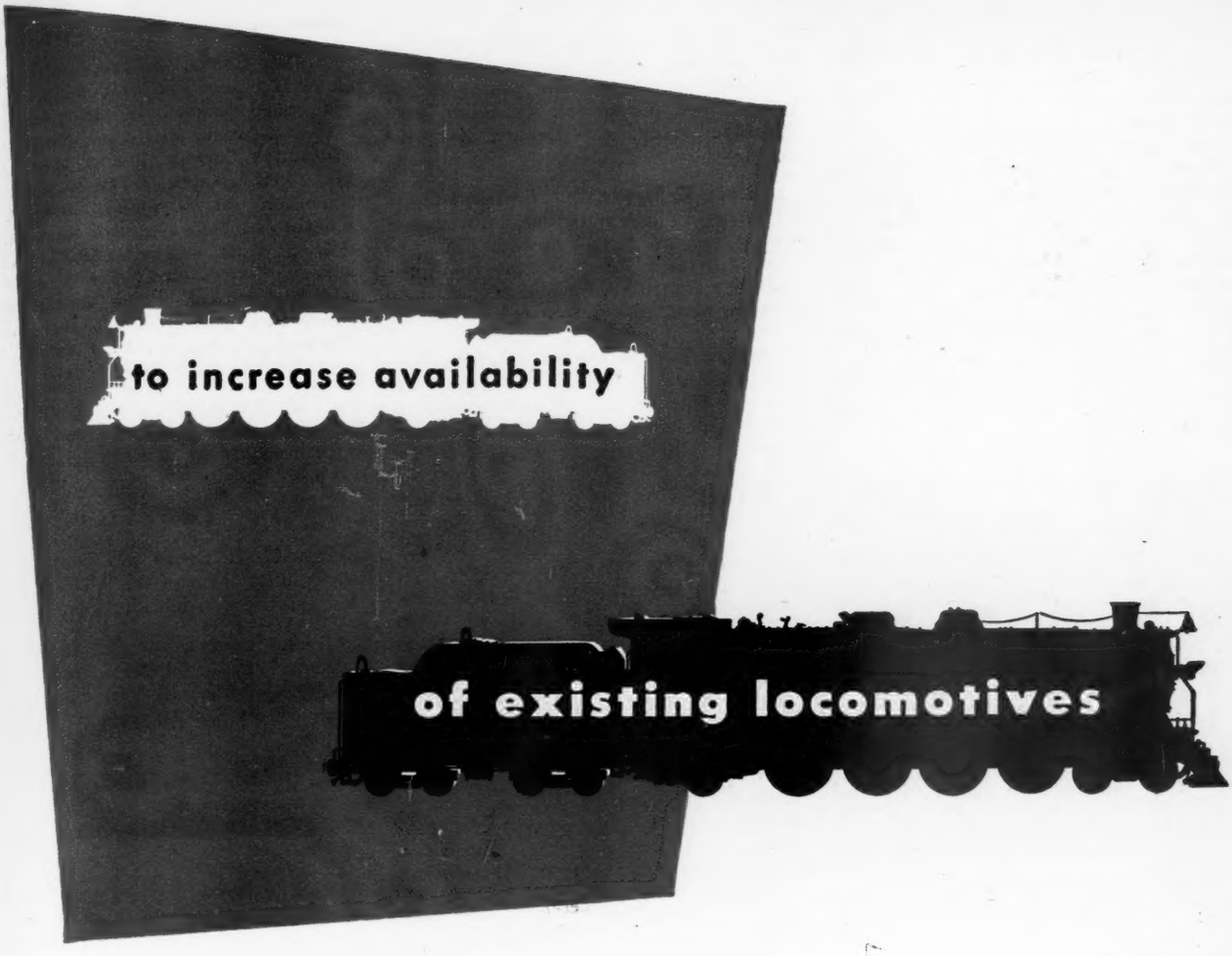

Road experience shows Security Circulators definitely tend to reduce honeycombing, flue plugging and cinder cutting, and to prolong the life of arch brick. Consequently the installation of Security Circulators in existing steam locomotives makes them available for *continuous operation* for longer periods between shoppings.

The resulting gain in locomotive availability will rapidly repay, through the increased earning power of the locomotive, the cost of installing Security Circulators.

AMERICAN ARCH COMPANY, INC.

NEW YORK • CHICAGO

SECURITY CIRCULATOR DIVISION

auditor of revenues of the Grand Trunk Western at Detroit, Mich.; in 1923 he became assistant general auditor of revenues, C. N. R., at Montreal, and in 1930, auditor of revenues. Mr. Godfrey was appointed assistant comptroller in 1943, which position he held until his retirement.

Mr. Spence, a native of Montreal, entered the service of the Grand Trunk in 1902 as office boy in the office of the auditor of freight accounts. He received successive promotions to traveling auditor, auditor of revenues department, chief clerk, assistant auditor, overcharge claims, chief accountant, special auditor, chief disbursements accountant and auditor of overcharge claims in 1942. He became auditor of agencies in 1943, which position he held until his recent appointment as auditor of revenues.

Henry O. Harries, assistant tax agent of the Atchison, Topeka & Santa Fe, has been appointed tax agent at Los Angeles, Cal., succeeding **Frank T. Thompson,** who has retired. Mr. Thompson was born at Creston, Ill., in 1877, and joined the Santa Fe in 1900 as an employee in the local freight office at Los Angeles. He transferred to San Bernardino in 1902, and returned to Los Angeles in 1904 to become employed in the general manager's office. In 1917 Mr. Thompson entered the tax department as chief clerk and was later advanced to assistant tax agent. He had held the position of tax agent since June 1, 1929.

Robert L. Fulton, whose promotion to assistant general auditor of the Northern Pacific, with headquarters at St. Paul, Minn., was reported in *Railway Age* of October 4, was born on November 16, 1893, at Greenville, Tex, He entered railroad service with the N. P. in 1914 as a bill clerk in the freight office at Chehalis, Wash., and was later promoted to cashier. In 1916 he became assistant traveling auditor at Tacoma, Wash., and the following year was appointed traveling auditor at Glendive, Mont. He subsequently held this position at various points on the railroad until 1941, when he was appointed chief clerk, station section, in the office of the auditor of passenger and station accounts. He was advanced to auditor of passenger and station accounts in 1944, the position he held at the time of his recent promotion.

Henry J. Peterson, whose retirement as auditor of freight accounts of the Union Pacific, at Omaha, Neb., was reported in *Railway Age* of October 11, was born on November 30, 1879, at Duck Creek, Ill., and received his higher education at Nebraska Wesleyan University and the Omaha (Neb.) Commercial College. He began his railroad career in 1902 as a file clerk in the freight accounting department of the U. P. at Omaha, and subsequently held various clerical positions until August, 1923. At that time he was appointed assistant auditor of freight accounts, later advancing to acting auditor of freight accounts. Mr. Peterson had held the position of auditor of freight accounts since April, 1942.

OPERATING

Frank H. Daggett, superintendent of the Southern division of the Bangor & Aroostook at Bangor, Me., has been appointed general manager, succeeding **Roy H. MacCready,** vice-president of operations.

Oliver K. Lewis, superintendent of the Jacksonville division of the Railway Express Agency at Jacksonville, Fla., has been appointed superintendent of transportation at Atlanta, Ga., succeeding **T. C. Inman,** deceased.

James H. Dunlap has been appointed superintendent of vehicle service of the Railway Express Agency, with headquarters at Chicago, succeeding **J. R. Kastner,** who has retired after 53 years of service.

Samuel L. Fee, general superintendent, Eastern District, of the Chicago, Burlington & Quincy, with headquarters at Galesburg, Ill., has been appointed general manager, Lines West, at Omaha, Neb., succeeding **F. R. Mullen,** who has retired after 54 years of service. Mr. Fee is succeeded by **H. E. Hinshaw,** division superintendent at McCook, Neb., who in turn is succeeded by **W. P. Wilson,** superintendent of the Colorado & Southern (part of the Burlington System) at Denver, Colo. **William R. Eble,** division superintendent at Galesburg, Ill., has been appointed general superintendent, Central District, with headquarters at Burlington, Iowa, succeeding **Arthur J. Horton,** elected vice-president of the C. & S. Mr. Eble is succeeded by **Andrew E. Stoll,** division superintendent at Hannibal, Mo., who in turn is succeeded by **L. L. Smith,** superintendent at Alliance, Neb. Mr. Smith's successor is **W. F. Giles, Jr.,** assistant to general manager at Omaha. **J. C. Grisinger, Jr.,** assistant superintendent at Omaha, has been appointed assistant to general manager at that point, replacing Mr. Giles. **E. G. Wesson,** assistant to general manager, at Chicago, has been promoted to division superintendent at Aurora, Ill., succeeding **James L. Mulroy,** who has retired after 50 years of service. Mr. Wesson is succeeded by **William S. Kerr,** assistant superintendent, with headquarters at LaCrosse, Wis. Mr. Kerr's successor is **R. L. Sims,** assistant superintendent at Brookfield, Mo., who in turn is replaced by **John A. Lloyd,** assistant superintendent at Centerville, Iowa. **G. L. Griggs,** trainmaster at St. Joseph, has been moved to Centerville as Mr. Lloyd's successor. **James S. Sloan,** superintendent of terminals at Lincoln, Neb., has been appointed superintendent of terminals at Galesburg, a newly-created position. Mr. Sloan is succeeded by **C. H. Bremhorst,** terminal trainmaster at Omaha.

E. Rogers Oliver, Jr., superintendent of the Winston-Salem division of the Southern at Winston-Salem, N. C., has been transferred to the Richmond division at Richmond, Va., succeeding **J. Floyd Beaver,** who has been transferred to the Washington division at Alexandria, Va., to succeed **Charles K. Carter, Jr. Ben L. Stanfiel,** superintendent at Knoxville, Tenn., has been transferred to the Winston-Salem division, to succeed Mr. Oliver.

R. W. Davis, assistant superintendent of the Northern Pacific at Billings, Mont., has been promoted to superintendent at Glendive, Mont., succeeding **Howard W. McCauley,** appointed chief of personnel. Mr. Davis is succeeded by **W. C. Smith,** trainmaster at Missoula, Mont. **R. G. Knight** has been appointed trainmaster at Seattle, Wash., succeeding **A. T. Collins,** who has retired after 45 years of service with the railroad. Other appointments to trainmaster in Montana are: **I. W. Brewer,** Billings; **J. F. Peterson,** Forsyth; and **J. R. Ulyatt,** Missoula.

J. H. Sweet has been appointed superintendent of the Rock Island Southern, with headquarters at Rock Island, Ill.

TRAFFIC

Ronald I. Cross has been appointed agricultural agent of the Atchison, Topeka & Santa Fe at Amarillo, Tex.

J. A. Jefferis, assistant freight traffic manager of the Illinois Terminal at St. Louis, Mo., who has been associated with the company for 34 years, will retire on October 31.

R. J. Blagburn has been appointed appointed assistant general freight agent of the Baltimore & Ohio, with headquarters at Chicago.

K. L. Stivers, Northern traffic manager of the Illinois Terminal at Chicago, has been appointed eastern traffic manager at New York, succeeding **W. M. Long,** who has been appointed assistant vice-president at St. Louis, Mo. **D. A. Lewis** has been appointed Northern traffic manager at Chicago, to succeed Mr. Stivers.

Paul E. Carneck, assistant to general traffic manager of the Southern Pacific at Chicago, has been appointed general eastern freight agent at New York, succeeding **C. M. Biggs,** whose appointment as freight traffic manager of the Central district at San Francisco, Cal., was reported in *Railway Age* of August 23, page 68.

B. W. Tremayne has been appointed assistant to chief traffic officer of the Missouri Pacific, with headquarters at St. Louis, Mo., succeeding **D. L. Carter,** whose death was reported in *Railway Age* of October 11. **C. H. Goehner,** general agent at St. Joseph, Mo., has been appointed division freight agent at Kansas City, succeeding **W. C. Nunn,** who has been assigned other duties at his own request. Mr. Goehner is succeeded by **J. J. Richey.**

J. C. Paige will become general agent of the Chicago, Milwaukee, St. Paul & Pacific at Richland, Wash., on October 16, to be in charge of the line from Beverly, Wash., to Hanford, inclusive, and the cities of Kennewick and Pasco.

C. R. Seel, general agent of the Chicago Great Western, at Pittsburgh, Pa., has been promoted to assistant general freight agent, with headquarters at Kansas City,

News Department continued on next left-hand page.

An Ounce of Prevention Is Worth A Pound of Cure

The Elesco Steam Dryer System is an important factor in improving locomotive operation.

It prevents carryover from reaching throttle, valves and cylinders...which results in proper and efficient operation of these parts, and greatly reduced maintenance.

Descriptive literature on request.

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ELESCO

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Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • Steam Generators • Oil Separators • American Throttles

Mo. Mr. Seel is succeeded by **G. W. Boyle.**

ENGINEERING & SIGNALING

Joseph B. Gunnison has been appointed architect of the New York Central system at New York, succeeding **J. P. Gallagher,** who has been appointed general superintendent of insurance and fire protection. **H. C. Todd, Jr.,** has been appointed assistant architect.

F. R. Moore, communications engineer of the Atchison, Topeka & Santa Fe at Topeka, Kan., has been appointed construction engineer and **D. R. Weems,** telephone engineer, has been appointed his successor. **Jack Morgan,** construction engineer, has been appointed assistant division engineer at Needles, Cal.

B. Laubenfels, engineer of grade separation of the Chicago, Burlington & Quincy, has been appointed principal assistant engineer, with headquarters at Chicago. **A. W. Schroeder,** supervisor of extra gangs, has been appointed assistant to engineer of track, at Chicago. **F. X. Fischer,** instrumentman at Aurora, Ill., has been advanced to division engineer at Hannibal, Mo., succeeding **R. C. Russell,** who has been transferred to Aurora. Mr. Russell succeeds **C. J. McCarty,** who has retired after more than 42 years of service.

The duties of **J. R. Kanan,** assistant engineer of track of the Fort Worth & Denver City, at Fort Worth, Tex., have been extended to include the Colorado & Southern.

PURCHASES AND STORES

William B. Joachim, Jr., whose appointment as purchasing agent of the Lehigh & New England at Philadelphia,

Fabian Bachrach

William B. Joachim, Jr.

Pa., was reported in the *Railway Age* of October 4, was born on September 13, 1918, at Orange, N. J. Mr. Joachim was graduated from Pennsylvania State College in 1938 and Temple University Law School in 1947. He entered railroad service on October 16, 1945, with the Lehigh & New England at Philadelphia as assistant to purchasing agent, becoming assistant purchasing agent on August 1, 1946, which position he held until October 1, when he became purchasing agent.

A. J. Uttich, whose promotion to purchasing agent of the Pullman Company, with headquarters at Chicago, was reported in the *Railway Age* of October 4, was born on July 23, 1894, at Chicago, and joined Pullman there in 1910 as a messenger. He subsequently held various clerical positions until 1913, when he was appointed storekeeper in the stores department at Chicago. Mr. Uttich entered military service during World War I, returning to his former position on March 15, 1919. He left the company in June, 1919, but rejoined it the following year as storekeeper, after which he became a clerk in the general storekeeper's office at Chicago. In 1930 he was advanced to assistant general storekeeper, the position he held at the time of his new appointment.

MECHANICAL

John A. Welsch, whose promotion to superintendent of car department of the Illinois Central, with headquarters at Chicago, was reported in the *Railway Age* of October 4, was born on April 23, 1900, at Vicksburg, Miss. He began his railroad career with the Yazoo & Mississippi Valley (now I. C.) in 1916 as a machinist apprentice in his home town. He subsequently advanced through positions as machinist, district air brake foreman and roundhouse foreman, He was promoted to general foreman at Baton Rouge, La., in 1933, and held that position later at Vicksburg and New Orleans, La., successively. Mr. Welsch was appointed master mechanic at Paducah, Ky., in 1941, and shop superintendent there in June, 1945. He was serving in the latter capacity at the time of his new appointment.

SPECIAL

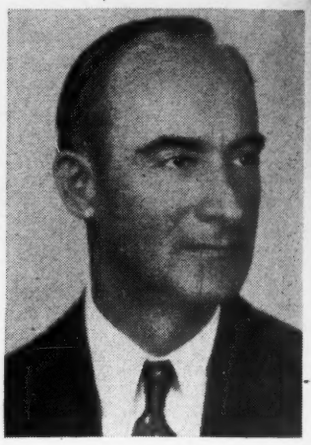
Howard W. McCauley, division superintendent of the Northern Pacific, with headquarters at Glendive, Mont., has been appointed chief of personnel, with headquarters at St. Paul, Minn., succeeding **M. J. Byrnes,** whose death was reported in *Railway Age* of October 4.

Arthur D. Thatcher, whose promotion to chief special agent and general claim

Arthur D. Thatcher

agent of the Western Pacific, at San Francisco, Cal., was reported in *Railway Age* of October 4, was born in 1906, at Los Angeles, Cal. Mr. Thatcher began his career in the finger-printing and identification bureau of the Colton (Cal.) police force, and joined the W. P. in its special agents' department in 1927. He later became special agent, and in 1942, was appointed assistant chief special agent and claim agent, which position he held at the time of his new promotion.

Edwin J. Hammann, whose appointment as director of personnel of the Missouri-Kansas-Texas, at Dallas, Tex., was reported in *Railway Age* of October 4, was born on October 10, 1896, at Sedalia, Mo.,



Edwin J. Hammann

and joined the Katy in that city in 1915. He subsequently held various clerical positions at Sedalia, Parsons, Kan., and Dallas until 1922, when he was appointed chief clerk to superintendent at Waco, Tex. He later held similar positions at various points on the Katy, and in 1945 was appointed supervisor of wage agreements, the position he held at the time of his new appointment.

OBITUARY

Col. William S. Battle, Jr., former vice-president of the Norfolk & Western at Roanoke, Va., died on October 25 at his home in that city, after a long illness, at the age of 77. Colonel Battle retired on April 1, 1935, after 47 years of service.

Albert Reilly, signal engineer of the Delaware, Lackawanna & Western, with headquarters at Hoboken, N. J., died on October 21. Mr. Reilly entered railroad service on January 10, 1901, as signal helper on the Morris & Essex division of the Lackawanna at Hoboken, then serving successively as batteryman, wireman and maintainer. In April, 1907, he was appointed system construction foreman and in 1911 he became signal inspector of the Syracuse and Utica divisions. From April, 1912, to 1916 Mr. Reilly was circuit designer and draftsman, becoming general signal inspector in the latter year. He was appointed assistant signal engineer in September, 1923, and signal engineer in February, 1942.

David X. Greenberg, assistant engineer, maintenance of way, of the Missouri Pacific, with headquarters at St. Louis, Mo., died on October 23, at the M. P. hospital in that city.

Table of Operating Revenues and Expenses appears on the next left-hand page.

Within this circle . . . HSGI fights wear

Pick any steam locomotive on any Class I railroad. If you assume that its valve and cylinder bushings are made of Hunt-Spiller Gun Iron you will be right more often than not. For this traditionally high quality material—known to thousands of railroad mechanical men simply as HSGI—has been standard for more than a generation on the great majority of America's important railroads. And this preference is not just the result of habit. Railroad men know that HSGI withstands wear and heat better than any other bushing material.

Hunt-Spiller are exclusive railroad sales representatives for Double Seal Piston Rings made for Diesel and other services. Double Seal rings are cast from Hunt-Spiller *Air Furnace* Gun Iron.

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Operating Revenues and Operating Expenses of Class I Steam Railways

Compiled from 126 monthly reports of revenues and expenses representing 130 Class I steam railways

(Switching and Terminal Companies Not Included)

FOR THE MONTH OF AUGUST 1947 AND 1946

Item	United States		Eastern District		Southern District		Western District	
	1947	1946	1947	1946	1947	1946	1947	1946
Miles of road operated at close of month	227,228	227,545	53,731	53,778	46,157	46,264	127,340	127
Revenues:								
Freight	$596,592,083	$546,189,996	$222,070,319	$211,615,827	$119,843,591	$111,582,350	$254,678,173	$222,9
Passenger	94,001,442	112,116,540	47,266,923	53,224,238	14,151,708	17,735,610	32,582,811	41,1
Mail	11,129,705	10,365,845	4,178,164	3,725,773	1,951,461	1,866,511	5,000,080	4,7
Express	7,971,316	7,799,590	1,811,654	233,160	1,069,482	1,246,692	5,090,180	6,3
All other operating revenues	35,563,413	33,819,546	15,129,588	14,967,848	5,841,328	4,743,415	14,592,497	14,1
Railway operating revenues	745,257,959	710,291,517	290,456,648	283,766,846	142,857,570	137,174,578	311,943,741	289,3
Expenses:								
Maintenance of way and structure	106,556,568	102,877,352	40,838,144	38,741,651	21,988,289	21,116,568	43,730,135	43,0
Depreciation	10,171,686	10,048,577	4,324,751	4,281,480	1,756,267	1,731,706	4,090,668	4,0
Retirements	1,475,021	1,532,857	617,550	265,931	290,693	203,639	566,778	1,0
Deferred maintenance	*650,190	*609,666	*14,581	*130,290	*17,404	*9,143	*618,205	*4
Amortization of defense projects	120,033	2,125	11,883	*38,374	33,665	19,025	74,485	
Equalization	*2,377,298	*1,280,686	*2,114,941	*1,213,199	*10,994	*74,912	*251,363	
All other	97,817,316	93,184,145	38,013,482	35,576,103	19,936,062	19,246,253	39,867,772	38,3
Maintenance of equipment	127,030,284	126,688,869	53,396,797	54,414,622	25,759,295	24,436,791	47,874,192	47,8
Depreciation	19,407,249	18,427,780	7,717,896	7,521,247	4,323,802	3,966,614	7,365,551	6,9
Retirements	*43,701	*10,461	*6,829	*3,210	*20,741	*212	*16,131	
Deferred maintenance and major repairs	*230,606	*352,930	90,000	*16,741	*60,664	*78,840	*259,942	*2
Amortization of defense projects	1,234,190	971,024	455,269	412,407	248,621	148,364	530,300	4
Equalization	64,191	*143,425	48,444	*848	*84,754	*140,347	100,501	
All other	106,598,961	107,796,881	45,092,017	46,501,767	21,353,031	20,541,212	40,153,913	40,7
Traffic	14,615,150	13,903,726	5,019,256	5,091,764	3,087,418	2,786,035	6,508,476	6,0
Transportation—Rail line	286,287,503	281,658,580	122,418,894	121,627,317	52,029,918	51,013,059	111,838,691	109,0
Miscellaneous operations	11,471,778	11,901,919	4,211,210	4,225,214	1,527,679	1,603,330	5,732,889	6,0
General	19,644,597	18,872,257	7,439,522	7,260,095	4,211,965	4,036,112	7,993,110	7,5
Railway operating expenses	565,605,880	555,902,703	233,323,823	231,360,663	108,604,564	104,991,895	223,677,493	219,5
Net revenue from railway operations	179,652,079	154,388,814	57,132,825	52,406,183	34,253,006	32,182,683	88,266,248	69,7
Railway tax accruals	84,228,038	58,212,926	25,622,099	18,864,558	18,630,762	15,135,462	39,975,177	24,2
Pay-roll taxes	29,428,899	21,983,583	12,292,744	9,241,407	5,623,947	4,201,759	11,512,208	8,5
Federal income taxes	30,738,445	13,817,848	4,263,240	938,782	8,214,535	6,169,698	18,260,670	6,7
All other taxes	24,060,694	22,411,495	9,066,115	8,684,369	4,792,280	4,764,005	10,202,299	8,9
Railway operating income	95,424,041	96,175,888	31,510,726	33,541,625	15,622,244	17,047,221	48,291,071	45,5
Equipment rents—Dr. balance	11,205,852	11,040,048	4,119,391	4,741,660	*1,084,210	*684,639	8,170,671	6,9
Joint facility rent—Dr. balance	3,393,387	3,280,276	1,696,849	1,606,911	529,820	506,739	1,166,718	1,1
Net railway operating income	80,824,802	81,855,564	25,694,486	27,193,054	16,176,634	17,225,121	38,953,682	37,4
Ratio of expenses to revenues (per cent)	75.9	78.3	80.3	81.5	76.0	76.5	71.7	7

FOR THE EIGHT MONTHS ENDED WITH AUGUST 1947 AND 1946

Item	United States		Eastern District		Southern District		Western District	
	1947	1946	1947	1946	1947	1946	1947	1946
Miles of road operated at close of month	227,345	227,542	53,733	53,807	46,193	46,274	127,419	127
Revenues:								
Freight	$4,529,502,627	$3,687,707,574	$1,728,473,064	$1,380,127,272	$951,975,580	$783,570,583	$1,849,053,983	$1,524,0
Passenger	644,822,074	896,251,026	321,995,867	402,255,812	105,954,727	153,393,113	216,871,480	340,6
Mail	88,448,959	82,651,797	31,969,932	29,020,572	16,203,434	15,157,232	40,275,593	38,4
Express	77,150,577	58,030,220	23,249,905	3,720,199	13,573,761	9,469,817	39,926,911	44,8
All other operating revenues	260,593,537	237,359,370	115,081,641	108,240,099	44,326,901	34,489,403	101,184,995	94,6
Railway operating revenues	5,600,517,774	†4,961,999,987	2,220,770,409	1,923,363,954	1,132,434,403	996,080,148	2,247,312,962	2,042,5
Expenses:								
Maintenance of way and structure	781,661,264	769,161,770	284,202,349	273,421,193	171,300,609	165,959,668	326,158,306	329,7
Depreciation	81,030,599	80,132,372	34,648,707	34,358,056	13,888,771	13,595,696	32,493,121	32,1
Retirements	6,503,947	5,841,390	1,617,885	1,182,807	1,602,018	814,023	3,284,044	3,8
Deferred maintenance	*3,521,292	*3,834,188	*198,237	*805,581	*190,672	68,568	*3,132,383	*3,0
Amortization of defense projects	853,960	191,837	74,514	46,958	245,972	85,397	533,474	5
Equalization	1,766,946	11,576,254	*431,926	4,990,453	837,959	3,466,156	1,360,913	3,1
All other	695,027,104	675,254,105	248,491,406	233,648,500	154,916,561	147,929,828	291,619,137	293,6
Maintenance of equipment	1,010,292,733	971,238,452	432,220,573	405,439,877	204,978,760	188,128,248	373,093,400	377,6
Depreciation	153,260,328	147,301,575	61,693,624	60,511,869	33,669,192	31,546,372	57,897,512	55,2
Retirements	*297,768	*267,364	*50,642	*93,407	*90,396	*82,027	*156,730	*9
Deferred maintenance and major repairs	*3,139,142	*2,392,878	87,180	*189,518	*1,253,593	*245,624	*1,972,729	*1,9
Amortization of defense projects	9,966,711	5,653,958	3,707,794	2,393,740	2,002,464	904,382	4,256,453	2,3
Equalization	617,572	1,029,396	*14,384	10,649	530,225	948,323	101,731	7
All other	849,885,032	819,913,765	366,797,001	342,806,544	170,120,868	155,056,822	312,967,163	322,0
Traffic	114,283,821	109,525,253	39,535,207	39,275,695	24,398,357	21,958,179	50,350,257	48,2
Transportation—Rail line	2,220,739,005	2,093,513,241	965,151,333	899,052,114	414,008,331	387,350,568	841,579,341	807,1
Miscellaneous operations	84,169,222	84,923,814	31,299,739	32,289,574	12,462,779	12,276,200	40,406,704	40,3
General	158,057,433	155,164,577	61,088,331	60,240,277	34,428,729	33,009,539	62,540,373	61,9
Railway operating expenses	4,369,203,478	4,183,527,107	1,813,497,532	1,709,718,730	861,577,565	808,682,402	1,694,128,381	1,665,1
Net revenue from railway operations	1,231,314,296	778,472,880	407,272,877	213,645,224	270,856,838	187,397,746	553,184,581	377,4
Railway tax accruals	610,957,972	379,547,033	207,176,482	122,136,160	141,543,590	99,590,259	262,237,900	157,8
Pay-roll taxes	228,655,105	168,741,509	95,713,686	69,297,979	44,683,272	32,423,745	88,258,147	67,0
Federal income taxes	196,160,737	38,185,928	39,861,575	*15,294,027	58,519,604	30,817,287	97,779,558	22,6
All other taxes	186,142,130	172,619,596	71,601,221	68,132,208	38,340,714	36,349,227	76,200,195	68,1
Railway operating income	620,356,324	398,925,847	200,096,395	91,509,064	129,313,248	87,807,487	290,946,681	219,4
Equipment rents—Dr. balance	82,961,094	73,304,100	38,160,734	31,781,991	*3,787,300	*831,350	48,587,660	42,3
Joint facility rent—Dr. balance	27,399,559	25,973,924	13,337,499	12,907,317	4,243,299	3,799,976	9,818,761	9,2
Net railway operating income	509,995,671	299,647,823	148,598,162	46,819,756	128,857,249	84,838,861	232,540,260	167,9
Ratio of expenses to revenues (per cent)	78.0	84.3	81.7	88.9	76.1	81.2	75.4	

* Decrease, deficit, or other reverse item.

† Railway operating revenues are after deduction of $2,177,713 for the eight months ended with August, 1946, to create a reserve for land deductions in dispute.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

Meetings and Conventions

(Continued from page 59)

ciation of American Railroads.—George M. Campbell, Transportation Bldg., Washington 6, D. C.
Operations and Maintenance Department.—J. H. Aydelott, Vice-president, Transportation Bldg., Washington 6, D. C.
Operating-Transportation Division. — L. R. Knott, 59 E. Van Buren St., Chicago 5, Ill.
Operating Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Transportation Section.—H. A. Eaton. 59 E. Van Buren St., Chicago 5, Ill.
Communications Section.—W. A. Fairbanks, 30 Vesey St., New York 7, N. Y.
Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York 17, N. Y.
Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5, Ill.
Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Protective Section.—J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Safety Section. — J. C. Caviston, 30 Vesey St., New York 7, N. Y.
Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.
Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill. Annual meeting, March 16-18, 1948, Palmer House, Chicago, Ill.
Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago 5, Ill.
Signal Section—R. H. C. Balliet, 30 Vesey St., New York 7, N. Y. Annual meeting, September 14-16, 1948, Hotel Statler, Buffalo, N. Y.
Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago 5, Ill.
Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago 5, Ill.
Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Bldg., Washington 6, D. C.
Freight Claim Division.—Lewis Pilcher, (Executive Vice-Chairman), 59 E. Van Buren St., Chicago 5, Ill.
Motor Transport Division.—Transportation Bldg., Washington 6, D. C.
Car Service Division.—W. C. Kendall, Chairman, Transportation Bldg., Washington 6, D. C.
Finance Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Bldg., Washington 6, D. C.
Accounting Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Treasury Division.—E. R. Ford, Transportation Bldg., Washington 6, D. C.
Traffic Department.—Walter J. Kelly, Traffic Officer, Transportation Bldg., Washington 6, D. C.

ciation of Railway Claim Agents.—F. L. Johnson, Gulf, Mobile & Ohio R. R., 340 W. Harrison St., Chicago 7, Ill. Annual meeting, May 19-21, 1948, French Lick Springs Hotel, French Lick, Ind.

ge and Building Supply Men's Association.—E. C. Gunther, Duff-Norton Mfg. Co., 122 S. Michigan Ave., Chicago 3, Ill.

adian Railway Club.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal 28, Que. Regular meetings second Monday of each month, except June, July and August, Mount Royal Hotel, Montreal, Que.

Department Association of St. Louis.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis 3, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

Department Officers' Association.—F. H. Stremmel, 6536 Oxford Ave., Chicago 31, Ill.

Foremen's Association of Chicago.—W. E. Angier, chief A. A. R. clerk, C. B. & Q. R. R., 547 W. Jackson Blvd., Chicago 6, Ill. Regular meetings, second Monday of each month, except June, July and August, Union Station, Chicago, Ill.

ral Railway Club of Buffalo.—R. E. Mann, 1840-42 Hotel Statler, McKinley Square, Buffalo 5, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

cago Luncheon Club of Military Railway Service Veterans. — Col. R. O. Jensen. Schiller Park, Ill. Luncheon, second Wednesday of each month, Chicago Traffic Club, Palmer House, Chicago, Ill.

ern Association of Car Service Officers.—H. J. Hawthorne, Union Railroad, East Pittsburgh, Pa.

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This new one-piece all-steel main valve piston for a cross-compound pump is just one example of Brake Equipment & Supply Company's policy of providing better brake parts through constant research, engineering, and improved manufacturing methods. Write for complete details. *Patent 2,281,381

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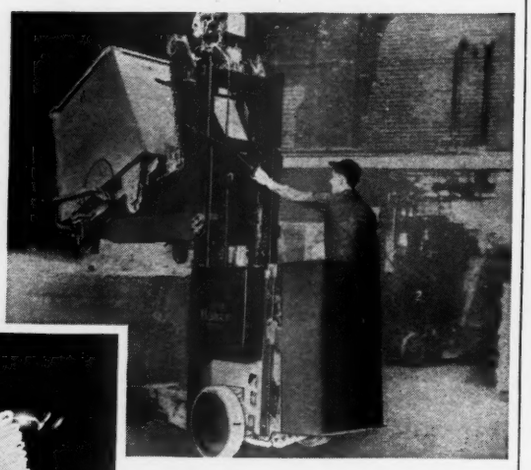
This Erie plant has a fleet of 24 storage-battery powered industrial trucks in daily operation—with several more on order. Annual production is well over 100,000,000 lbs. of paper, comprising almost 3,000 different kinds, sizes and colors. Trucks are used for unloading and storing incoming raw materials, transporting materials in process, warehousing finished products, and for loading orders for shipment into box-cars. "In all cases" the company states, "sizeable savings were made, not only in handling cost, but also the jobs in which the trucks were used were made many times easier."

Material Handling operations at this plant are controlled by a central department, which integrates all operations and enables the company to utilize its equipment to the best advantage. Where possible, materials are handled in unit loads on pallets or skids. Plans are under way to have all suppliers ship materials on pallets—incoming shipments not now on pallets are palletized at the receiving point. A new warehouse just completed was designed around mechanized unit-load handling with electric-powered trucks and tractor-trailers. The results are a maximum use of warehouse space, a minimum of handling time and cost, and better, faster service for the company's customers.



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EASTERN CAR FOREMAN'S ASSOCIATION.—W. Dizard, 30 Church St., New York 7, N. Regular meetings, second Friday of January, February (Annual Dinner), March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark.

MAINTENANCE OF WAY CLUB OF CHICAGO.—C. Knowles, Room 2000, 105 W. Adams, Chicago 3, Ill. Regular meetings, first Monday of each month, October through April, inclusive, except December, when third Monday, Hardings at the Fair.

MASTER BOILER MAKERS' ASSOCIATION—A. Stiglmeier, 29 Parkwood St., Albany 3, N. Y.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7, N. Y. Meets in October, December, February and April. Next meeting, December 11, 1948, noon, Hotel Sheraton Lounge, New York, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 Post Office Bldg., Washington 25, D. C. Annual meeting, November, 1948, Savannah.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—F. J. Armstrong, United States Radiator Corporation, United Artists Bldg., Detroit, Mich.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—Ralph F. Lacey, Suite 450, Munsey Bldg., Washington 4, D. C. Annual meeting, November 20-21, 1947, Palmer House, Chicago, Ill.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle, Chicago 4, Ill. Meeting and exhibit in connection with A. R. E. A. Convention, March 15-18, 1948, Amphitheatre, Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, 683 Atlantic Ave., Boston 11, Mass. Regular meetings, second Tuesday of each month except June, July, August and September, Hotel Vendome, Boston, Mass.

NEW YORK RAILROAD CLUB. — D. W. Pye, 30 Church St., New York 7, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September and December, 29 W. 39th St., New York, N. Y.

NORTHWEST CARMEN'S ASSOCIATION. — E. Myers, Minnesota Transfer Ry., 1434 Ave., St. Paul 4, Minn. Regular meeting, first Monday of each month, except July and August, Midway Club, 1931 versity Ave., St. Paul, Minn.

PACIFIC RAILWAY CLUB. — William S. Wo P. O. Box 458, San Rafael, Cal. Regular meetings, second Thursday of each alternate month at Palace Hotel, San Francisco, and Hotel Biltmore, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION.—P. H. Mi ton, First National Bank Bldg., Chicago, Ill. Annual dinner, November 21, Hotel Stevens, Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Cow 308 Keenan Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month except June, July and August, Fort Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION. — J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago 6.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago 4.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION —A. W. Brown, Room 1424, 30 Church New York 7, N. Y.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York N. Y. Meets with Communications Section of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 610 Shell Bldg., St. Louis 3, Mo.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise LaChance, Room 431 S. Dearborn St., Chicago 5, Ill. Annual meeting, September 21-23, 1948, Chicago.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday of January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS —D. W. Brantley, C. of Ga., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. Box 8, Terminal "A," Toronto 2, Ont. Regular meetings, fourth Monday of each month except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, and C. Company, 59 E. Van Buren St., Chicago 5, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 225 Bidwell Ave., Westleigh, Staten Island 2, N. Y.

WESTERN RAILWAY CLUB.—E. E. Thulin, S 339, Hotel Sherman, Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.